

# LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

## Volume 5 | Technical Appendices

CFA11 | Stoke Mandeville and Aylesbury

**Survey reports (CH-004-011)**

Cultural heritage

November 2013

ES 3.5.2.11.7

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Department  
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1 Introduction

1.1 Structure of the cultural heritage appendices

- 1.1.1 The cultural heritage appendices for the Stoke Mandeville and Aylesbury community forum area (CFA011) comprise:
- baseline reports (Volume 5: Appendix CH-001-011);
  - a gazetteer of heritage assets (Volume 5: Appendix CH-002-011);
  - an impact assessment table (Volume 5: Appendix CH-003-011); and
  - survey reports (this appendix).
- 1.1.2 Maps referred to throughout the cultural heritage appendices are contained in the Volume 5, Cultural Heritage Map Book.
- 1.1.3 Where appropriate, sites or assets discussed within this report have been cross referenced with the Gazetteer of heritage assets (Volume 5: Appendix CH-002-010) and can be viewed on Maps CH-01-031 to CH-01-034L1 and CH-02-015 to CH-02-016 in the Volume 5, Cultural Heritage Map Book.

1.2 Surveys undertaken

- 1.2.1 This appendix contains the results of a series of archaeological surveys. These surveys comprised:
- a fully-integrated remote sensing survey incorporating light detection and ranging (LiDAR), hyperspectral imagery and aerial photographic analysis of the majority of the Proposed Scheme;
  - geophysical surveys at nine locations along the route (site codes (from south to north): IBoAA (1–2); IBoAB; IBoAC; KBoAA; KBoAC; and KBoAD (B–D)), encompassing an approximate total of 114.7ha; and
  - an archaeological fieldwalking survey at one location along the route (site code: KBoAD(A–D), encompassing approximately 90ha.

1.3 Surveys proposed but not undertaken

- 1.3.1 No additional surveys were proposed in the Stoke Mandeville and Aylesbury study area.

2 Remote sensing survey report

2.1 Introduction

- 2.1.1 This report outlines the results of the archaeological remote sensing survey of the Stoke Mandeville and Aylesbury area. This was an archaeological survey involving the systematic

analysis, interpretation, mapping and recording of archaeological sites from aerial photographs, hyperspectral imagery and LiDAR imagery.

- 2.1.2 The aim was to accurately map and record the form and extent of archaeological features visible as cropmarks, soilmarks, earthworks or structures on a range of different remote sensed imagery, in order to inform the baseline assessment of the cultural heritage resource.
- 2.1.3 The study area has not been covered by an English Heritage national mapping programme project. The Thames Valley national mapping programme project area<sup>1</sup> falls to the south-west, and the area covered by the Hertfordshire national mapping programme project<sup>2</sup> lies to the east. As such, there is no existing systematic survey of archaeological features visible on remote-sensed sources for the Stoke Mandeville and Aylesbury study area.

The study area

- 2.1.4 The study area for this remote sensing survey covered the entire length of the route within the Stoke Mandeville and Aylesbury study area, which falls entirely within Buckinghamshire.
- 2.1.5 The study area generally comprised a 700m-wide strip centred on the route (350m either side of the centre line). This provided a buffer sufficient to offer contextual information for all recorded sites. Where the Proposed Scheme boundary extended beyond the edge of the 700m-wide strip, the study area was expanded to the limit of the remote sensing survey boundary shown in Figures CH-004-011-01 to CH-004-011-08.
- 2.1.6 In total the Stoke Mandeville and Aylesbury study area archaeological remote sensing survey covered an area of 7.4km<sup>2</sup>.

2.2 Methodology

- 2.2.1 In order to provide consistency with other similar datasets (namely English Heritage national mapping programme mapping), the archaeological remote sensing survey was carried out in broad accordance with the current version of the English Heritage national mapping programme standards<sup>3</sup>. The interpretations applied to identified features are consistent with the preferred terms within the English Heritage *Monument Type Thesaurus*<sup>4</sup>.

Sources: modern aerial photographs

- 2.2.2 High resolution (12.5cm) vertical aerial orthophotography taken specifically for the purposes of the Proposed Scheme was made available for this survey. This imagery was captured during 2012. It generally consists of a 700m-wide strip centred on the route, although it is slightly wider in some areas. It was viewed digitally within a geographical information system (GIS) program. The level of accuracy of the orthorectification is such that features mapped from this source should be within 15cm of true ground position.
- 2.2.3 Pre-existing vertical aerial orthophotography dating from the 1990s and 2000s was also made available for this survey. This was supplied under the Pan-Government Agreement. The resolution is 25cm. The level of accuracy of the orthorectification is such that features mapped

<sup>1</sup> Fenner, V.E.P., (1994), *The Thames Valley Project: a report for the National Mapping Programme*, RCHME Aerial Survey Report Series.  
<sup>2</sup> Fenner, V.E.P., (1992), *Crop Marks in Hertfordshire: a report for the National Mapping Programme*, RCHME internal document.  
<sup>3</sup> Winton, H., (2012), *Standards for National Mapping Programme projects, Version 0.1 Draft*, English Heritage, Aerial Investigation and Mapping, Typescript document.  
<sup>4</sup> English Heritage; NMR Monument Type Thesaurus; [http://thesaurus.englishheritage.org.uk/thesaurus.asp?thes\\_no=1](http://thesaurus.englishheritage.org.uk/thesaurus.asp?thes_no=1); Accessed: August 2012–June 2013.

from this source should be within 1.5m of true ground position<sup>5</sup>. This vertical imagery was also viewed on-screen within GIS.

Sources: historic aerial photographs

- 2.2.4
- All readily-available historic vertical and oblique aerial photographs held in archives were also consulted for this project. This included photographs held at the English Heritage Archive (formerly the National Monuments Record) and the Cambridge University Unit for Landscape Modelling. The latter is also referred to as the Cambridge University Collection of Aerial Photography.
- 2.2.5
- The 279 historic vertical aerial photographs of the study area in the English Heritage Archive (Table 5) were taken for non-archaeological purposes between 1945 and 1997, by organisations such as the Royal Air Force (RAF) and the Ordnance Survey (OS). These photographs often captured sites of historic interest incidentally, especially those shots taken in the first half of the 20th century, before archaeological remains may have been damaged or destroyed by the intensification of arable farming.
- 2.2.6
- The 84 historic oblique aerial photographs of the study area in the English Heritage Archive (Table 6) were taken between 1953 and 2011 and usually targeted known sites of architectural or archaeological interest. They were typically taken at a much larger scale than the 'blanket' vertical aerial photography, and were often timed to capture images of archaeological sites when they were at their most visible, i.e. when dry ground conditions favoured the development of clear cropmarks, or when low winter sun would reveal subtle earthworks.
- 2.2.7
- Sixty-two aerial photographs from the Cambridge University Collection of Aerial Photography fell within the study area (Table 7). These were vertical and oblique aerial photographs dating between 1953 and 2006.
- 2.2.8
- All aerial photographs in the English Heritage and Cambridge University Collection of Aerial Photography archives which fell within the study area were viewed in person and examined stereoscopically and under magnification where applicable. Copies were obtained where potential archaeological features were identified and the relevant photographs were considered to be of use either for transcription or for reference purposes.

Sources: light detection and ranging imagery

- 2.2.9
- High resolution light detection and ranging (LiDAR) data acquired specifically for the purposes of the project was made available for this survey. This data was captured in 2012. It generally consists of a 700m-wide strip centred on the route, although it is slightly wider in some areas.
- 2.2.10
- The resolution of the data supplied was 20cm. The level of accuracy of the orthorectification was such that features mapped from this source should be within 15cm of true ground position. The raster digital elevation model was viewed directly within GIS. The digital elevation model is LiDAR data that has been processed to provide a representation of the ground surface without objects such as vegetation or buildings. This means that

archaeological earthworks can be revealed on the LiDAR imagery, even if they lie beneath areas of woodland<sup>6</sup>.

Sources: hyperspectral imagery

- 2.2.11
- Hyperspectral imagery taken specifically for the purposes of the Proposed Scheme was made available for this survey. This imagery was captured in a series of runs during 2012 and provides a considerable buffer beyond the edge of the remote sensing survey study area boundary<sup>7</sup>.
- 2.2.12
- Thirty-four separate spectral band widths were captured, ranging from 406.075 nanometres to 992.065 nanometres. The band widths varied slightly between 16.28 nanometres at the lower end of the spectrum to 18.28 nanometres<sup>8</sup>. For each of the areas surveyed, varying combinations of three different bandwidths were analysed, with particular reference to bands 7–13 (882.725 nanometres to 773.255 nanometres) and bands 18–22 (683.435 nanometres to 612.185 nanometres), as these have been shown previously to be useful in archaeological remote sensing<sup>9</sup>.
- 2.2.13
- The hyperspectral imagery was viewed directly within GIS, as automated classification software does not work well with such high resolution data due to the prolifically varied response obtained from a single small area<sup>10</sup>.

Sources: historic environment record data

- 2.2.14
- Data from the Buckinghamshire historic environment record (HER) was supplied for the survey. These records were used as a reference to aid interpretation of features visible on remote sensed imagery, either through a pre-existing identification of a visible feature, or by providing information that could help characterise the likely cultural heritage resource of the area.
- 2.2.15
- The HER data was supplied as points, lines and polygons, with identifying attribute data attached. Full monument record reports were also supplied as a portable document format document. The data supplied covered the entirety of the Buckinghamshire area, creating an ample buffer to provide contextual information for any archaeological sites of interest within the boundary of the remote sensing study area.

Sources: national record of the historic environment data

- 2.2.16
- Monument data from the national record of the historic environment, held by English Heritage, was supplied for the survey. This data was used as a reference to aid interpretation of features visible on remote sensed imagery, either through a pre-existing identification of a visible feature, or by providing information that could help characterise the likely cultural heritage resource of the area.
- 2.2.17
- This data was supplied as points, lines and polygons with identifying attribute data attached. Full monument record reports were also supplied as a portable document format document.

<sup>6</sup> This can sometimes depend upon the time of year that the LiDAR imagery was captured.  
<sup>7</sup> The Stoke Mandeville and Aylesbury study area was covered by hyperspectral run 4R.  
<sup>8</sup> Blom, (2012), *HS2 Hyperspectral Information*, BLOM Project Number: 03/037/12.  
<sup>9</sup> Powlesland, D., Lyall, J. and Donoghue, D., (1997), Enhancing the record through remote sensing: the application and integration of multi-sensor, non-invasive remote sensing techniques for the enhancement of the Sites and Monuments Record, *Internet Archaeology* 2; <http://dx.doi.org/10.11143/ia.2.4>; Accessed: 18 December 2012.  
<sup>10</sup> Powlesland, D., Lyall, J. and Donoghue, D. (1997).

<sup>5</sup> GeoStore; Aerial Photography RGB Product; <http://www.geostore.com/geostore4/WebStore?xml=geostore4/xml/productsAPRGB.xml>; Accessed: August 2013.

The data covered a 10km-wide strip (5km each side of the route centre line), thereby providing an ample buffer beyond the boundary of the remote sensing study area.

Sources: cartographic sources

- 2.2.18
- Historic Ordnance Survey (OS) mapping was supplied for the survey. The map tiles had been geo-referenced and were viewed digitally in GIS. Epochs 1–4 of the 1:2500 scale County Series maps, which typically date from 1898 onwards, were used as a reference to aid interpretation of features visible on the remote sensed imagery.
- 2.2.19
- In general, where features such as field boundaries, trackways, extractive pits or ponds were marked on historic OS maps, they were not mapped and recorded as part of this survey. This is because the objective of this project was to add to the known record, not duplicate it. Nevertheless, where the full extent or form of a feature was not recorded in its entirety on the historic maps, it was included in the transcription for this project.
- Interpretation, rectification and mapping
- 2.2.20
- All vertical and oblique images from the sources identified above were systematically examined for any archaeological features visible as cropmarks, soilmarks, earthworks or structures. In accordance with best practice for remote sensing surveys, all available sources for each field or land parcel were viewed in conjunction in order to enable the most accurate interpretation possible.
- 2.2.21
- Where archaeological features were visible on the LiDAR or aerial orthophotography, a detailed transcription, including all visible elements of the site in question, was carried out in ArcMap 10.1.
- 2.2.22
- Where additional sites, features or details were visible on the historic aerial photographs from the English Heritage or Cambridge University Collection of Aerial Photography archives, these images were rectified using the computer program Aerial 5.33 prior to their import into ArcMap for transcription.
- 2.2.23
- Digital OS MasterMap 1:1250 base maps were used to establish control points (it should be noted that even when 1:1250 scale data is obtained, the scale of the mapping for rural areas is only in fact 1:2500<sup>11</sup>). Six or more control points were used for each photograph, with errors kept below 1m for each control point. This provided an accuracy of less than 1m to the base map for the rectified photographs.
- 2.2.24
- A digital terrain model in the form of 5m point data was used in order to further refine the accuracy of the rectifications..
- 2.2.25
- The OS advise that their 1:1250 scale MasterMap data has an accuracy of 0.5m root mean square error for urban areas, and 1.1m root mean square error for rural areas<sup>12</sup>. Therefore, archaeological features transcribed from photographs rectified using this data will on average be accurate to within 1m–2m of their British national grid coordinates.

<sup>11</sup> Ordnance Survey; Products and Services FAQs: How accurate are your products?; <http://www.ordnancesurvey.co.uk/oswebsite/support/products-services.html>; Accessed: June 2013.  
<sup>12</sup> Ordnance Survey; Products and Services FAQs: How accurate are your products?; <http://www.ordnancesurvey.co.uk/oswebsite/support/products-services.html>; Accessed: June 2013.

- 2.2.26
- As already noted, in order to ensure consistency with other similar remote sensing datasets, this project was carried out in broad accordance with current national mapping programme standards and guidance. As such, the identified features were transcribed onto the standard national mapping programme drawing layers, using standard national mapping programme conventions<sup>13</sup> as detailed in Table 1.

Table 1: Layers used in GIS for digital transcription of archaeological features<sup>14</sup>

Layer name	Colour	Description
Bank	Red	Defines the outline of positive features such as boundary banks or windmill mounds. Thin banks, or those too diffuse to define accurately are included on this layer as a single line.
Ditch	Green	Defines the outline of negative features such as boundary ditches or hollow ways. Thin ditches, or those too diffuse to define accurately are included on this layer as a single line.
Large cut feature	Blue	Defines the outline of sizeable negative features such as quarries or extractive pits.
Levelled ridge and furrow outline or direction	Magenta	Defines the outline of a single block of ridge and furrow seen either as a cropmark, or an earthwork later known to have been levelled.  An arrow within each single block indicates the direction of ploughing.
Extant R&F outline or direction	Cyan	Defines the outline of a single block of ridge and furrow seen as earthworks on the latest available remote sensed imagery.  An arrow within each single block indicates the direction of ploughing.
Extent of area	Grey	Defines the extent of large features such as the perimeters of World War II airfields and military camps.
T-hachure	Dark blue	Top of the 'T' defines the top of a slope or scarp edge such as a lynchet or house platform. Body of the 'T' indicates the length and direction of the slope.
Structure	Purple	Defines the extent of surviving buildings and structures such as individual World War II Nissen Huts and pillboxes. Thin structures such as walls or concrete paths are included in this layer as a single line.

- 2.2.27
- Table 2 and Table 3 show period range and evidence range abbreviations used. The evidence abbreviations identify the form in which a feature is visible on the remote sensed imagery.
- 2.2.28
- Information relating to each of the transcribed features was recorded in the ArcMap attribute table. This included details such as the interpretation of each feature and the remote sensed source they were transcribed from, as well as the HER and national record of the historic environment numbers for the features if applicable. These results have been set out in Table 4.

Table 2: Period range abbreviations used in the GIS attribute data

Period	Abbreviation	Date range
Neolithic	N	4,000 – 2,400 BC
Bronze Age	BA	2,400 – 700 BC

<sup>13</sup> Winton, H., (2012).  
<sup>14</sup> Table 1 based on Winton, H., (2012), Section 7.5. P31.



Period	Abbreviation	Date range
Iron Age	IA	700 BC – AD 43
Roman	RO	AD 43 – 410
Early medieval	EM	AD 410 – 1066
Medieval	MD	AD 1066 – 1540
Post-medieval	PM	AD 1540 to 1901
20 <sup>th</sup> century	C20	AD 1901 – 2000
World War II	WWII	1939 to 1945
Uncertain	UN	

Table 3: Evidence abbreviations used in the GIS attribute data

Evidence	Abbreviation
Cropmark (includes soilmarks)	C
Earthwork	E
Levelled earthwork	LE
Destroyed monument (i.e. quarried-away)	DM
Structure	S

- 2.2.29
- The results of this remote sensing survey and transcription have been saved in the project ArcMap MXD and have been supplied with all of the additional required metadata attached. The results have also been exported as Esri shapefiles for ease of import into other GIS programs where necessary in compiling the baseline survey.

2.3 Limitations

- 2.3.1
- In some areas, the 2012 LiDAR and aerial orthophotography did not cover the full extent of the Proposed Scheme.
- 2.3.2
- Where archaeological sites have been identified solely from remote sensed imagery without confirmation from archaeological excavation or supporting evidence in the form of find-spots etc., it should be noted that the interpretation may be revised in the light of further investigation.
- 2.3.3
- It should be stressed that the absence of an archaeological feature on remote sensed imagery does not confirm its absence in the ground, as visibility from the air is sometimes dependent upon a complex combination of factors. These include:

• unsuitable conditions at the time of image capture (such as lighting, ground moisture content and crops or other ground cover);

• variable quality of photography;

• underlying features being masked by alluvial build-up; and

- areas where archaeological features either do not survive or have never existed.

- 2.3.4
- During the survey 'steps' of approximately 2m were noted at several points in the purpose-flown 2012 vertical orthophotography where adjacent image tiles had been joined to provide continuous coverage of the route.
- 2.3.5
- Archaeological features were not mapped beyond the boundary of the remote sensing survey study area, as the cumulative effect of this along the entire length of the route would have resulted in a significant increase in the study area. Where archaeological cropmarks, earthworks, soilmarks or structures continued beyond the study area boundary, this was noted in the attribute data of the mapped feature.
- 2.3.6
- The hyperspectral imagery obtained for the purposes of the Proposed Scheme did not include spectral bands in the short-wave to mid-infrared/thermal wavelengths (2,080 nanometres – 13,000 nanometres), which have been shown in the past to be of particular use in assessing archaeological potential. The mid-infrared/thermal range is especially likely to reveal subtle cropmarks or soilmarks that are not strong enough to be detectable in the visible part of the spectrum, due to the fact it will display very slight differences in water content present within both vegetation and the ground<sup>15</sup>.
- 2.4 Assumptions
- 2.4.1
- Information on the positional accuracy of the hyperspectral imagery has not been supplied. As such, it is assumed that the accuracy of the orthorectification of this source is at least as good as that of the Aerial 5.33 program outlined in Section 2.2 of this report – i.e. transcribed features will be accurate to within 1m–2m of true ground position.
- 2.5 Results: description
- 2.5.1
- The primary output of the archaeological remote sensing survey of the Stoke Mandeville and Aylesbury study area is the detailed digital transcription of each identified potential archaeological feature. Information pertaining to the interpretation of these features is contained within the attribute data of every line and polygon drawn in GIS.
- 2.5.2
- Table 4 itemises in detail the results of the Stoke Mandeville and Aylesbury study area survey. These details originate from the GIS attribute data. The results should be read in conjunction with Figures CH-004-11.01–08 of this appendix.
- 2.5.3
- Where a single mapped feature has generated two lines of identical attribute data<sup>16</sup>, the duplicate line has been removed from Table 4. Where the transcription of a site or feature consists of several lines or polygons which may have been visible on different sources, or in a different form (i.e. where different elements of the site are visible as both cropmarks and earthworks), the differing lines of the attribute data table have been retained in order to reflect these variations.
- 2.5.4
- The aerial survey ID is the unique identifier applied to each site or feature transcribed during this project. It was not considered sufficient to use the automatically generated 'feature ID'

<sup>15</sup> Powlesland, D., Lyall, J. and Donoghue, D., (1997).  
<sup>16</sup> Such as a block of ridge and furrow, which contains this information within both the polygon that defines its extent and the line indicating the direction of ploughing.

within GIS, as this would result in a site which consisted of several different features represented by different lines and polygons having several different identifying numbers. The aerial survey ID was also used to group features, such as several interconnecting former field boundaries. This is consistent with the approach taken by English Heritage on national mapping programme projects<sup>17</sup>. The aerial survey ID is prefixed with a different sequential letter for each CFA. For CFA11 it is the letter 'N'.

- 2.5.5 The national record of the historic environment and HER columns detail the relevant monument numbers for these authorities, where such numbers exist for transcribed features.
- 2.5.6 The period abbreviations used are set out in Table 2.
- 2.5.7 As noted in Section 2.1 of this report, the interpretation types (detailed in the type column) comply with the preferred terms within the English Heritage *Monument Type Thesaurus*<sup>18</sup> in order to achieve consistency with other similar transcribed datasets.
- 2.5.8 The evidence abbreviations refer to the physical nature of the recorded features. These abbreviations are set out in Table 3.
- 2.5.9 The remote sensed imagery used to transcribe each individual feature is detailed in the source column.
- 2.5.10 The description column is intended as a brief interpretation only, outlining the main features or points of note.
- 2.5.11 The full attribute table attached to every line and polygon transcribed as part of this survey contains additional columns not displayed in Table 4, such as the date the feature was transcribed and the initials of the member of staff responsible, etc.

<sup>17</sup> Winton, H., (2012).  
<sup>18</sup> English Heritage, *NMR Monument Type Thesaurus*.

Table 4: Exported GIS attribute data for each transcribed feature, detailing the interpretation applied. Note: there are no features numbered K71-K79.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
K01	N/A	N/A	MD	Field boundary / boundary bank	E	HS2 LiDAR 2012	A possible former field boundary bank is visible on LiDAR as a slightly extant earthwork. Cut by ridge and furrow (K02) as well as later field drains leading down to the stream to the south-east. Not recorded on historic OS maps.
K02	N/A	N/A	MD / PM	Ridge and furrow	C	NMR EA-AF-97C-702 1340 01-APR-1997	Levelled ridge and furrow is visible as cropmarks on vertical aerial photographs of 2007.
							Levelled ridge and furrow is just visible as faint cropmarks across this field. Appears to cut an earlier field boundary bank recorded as K03.
					E	HS2 LiDAR 2012	Ridge and furrow is visible as extant earthworks on LiDAR. Appears to cut an earlier boundary bank (K01).
K03	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A possible former field boundary is visible on LiDAR as a faintly extant linear bank in the centre of a field. Not recorded on historic OS maps. May be associated with the site of a former windmill recorded in the HER (Buckinghamshire HER: 0429900000).
K04 (SMA003)	344217	0093800000	MD	Deserted settlement / shifted village / church / demolition debris	C	HS2 Vertical Photography SP8309 2012	Remains of some of the elements of a deserted village and the demolished St Mary's Church (SMA003) are visible as cropmarks. Banks and ditches are visible.
					E	HS2 LiDAR 2012	Remains of a deserted village and the demolished St Mary's Church (SMA003) are visible as earthworks. Interpretation of the LiDAR is confused by the presence of mature trees. Banks and ditches are visible, as well what may be demolished masonry at the church site
							Possible further remains of the deserted medieval village are visible on LiDAR as diffuse, amorphous earthworks across this field. Too faintly extant to define and map individual tofts, crofts, hollow ways, etc., so all possible features enclosed by a single polygon.
K05	N/A	N/A	PM / UN	Extractive pit / quarry / spoil heap	E	HS2 LiDAR 2012	A possible former quarry pit is visible on LiDAR as a faintly extant earthwork in the corner of the field to the south-east of Stoke House. The slight bank visible on its south-eastern side is likely to be the remains of the spoil heap.
K06	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	An area of possible ridge and furrow is visible on LiDAR as faint earthworks. Cut by two paved paths crossing this field.
K07	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	A thin strip of ridge and furrow is visible as earthworks on LiDAR on the north-eastern verge of Risborough Road. Would presumably have continued into the adjacent field, where it has now been levelled by more recent ploughing.
							Very faintly extant possible ridge and furrow. Displays the characteristic almost fully plough-levelled appearance, wherein the ridges appear to have been ploughed together to form fewer, wider ridges than in adjacent better-preserved fields.
						Pan-Government Agreement SP8309 13-JUN-2003 / HS2 LiDAR 2012	Faintly extant ridge and furrow is just visible as earthworks on aerial photographs and LiDAR.
K08	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	A thin strip of ridge and furrow is visible as earthworks on LiDAR on the south-western verge of Risborough Road. Would presumably have continued into the adjacent field, where it has now been levelled by more recent ploughing.
							Faintly extant ridge and furrow is just visible as earthworks on LiDAR.
K09	344217	0093801000 / 00416000000  0093801000	MD	Moat / ditched enclosure	C	HS2 Vertical Photography SP8309 2012	Substantial 'L-shaped' ditch visible as a cropmark to the south-east of the site of St Mary's Church. May have been part of the medieval moat recorded as having existed at this site. Still clearly extant on early aerial photographs of the 1940s.
K10 (SMA003)	344217	0093803000	MD	Fishpond	E	HS2 LiDAR 2012	A series of possible fishponds are visible as earthworks on LiDAR along the banks of the stream, on the south-eastern side of the church and deserted medieval village remains.
							Possible fishpond visible as earthwork on the south-eastern side of the church and deserted medieval village remains (SMA003). Ridge and furrow (visible as cropmarks) appears run over this feature.



Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
				Fishpond / extractive pit	E	HS2 LiDAR 2012	Possible fishpond visible as earthwork on the bank of the stream, on the south-eastern side of the church and deserted medieval village remains. This feature is very irregularly-shaped, and may have been used later as an extractive pit.
K11	N/A	N/A	MD / PM	Windmill mound	E	HS2 LiDAR 2012	A possible windmill mound is visible as an earthwork on LiDAR, surrounded by a very shallow ditch. Now covered by trees. Not necessarily the right location for a windmill mound (relatively low-lying ground near to a river), so other interpretations are also possible. Cuts earlier ridge and furrow.
K12 (SMA010)	N/A	0247200000	PM / UN	Building platform	E	HS2 LiDAR 2012	A rectilinear 'island' amongst quarried areas which has previously been interpreted as a medieval house platform. It may be that a structure associated with the extractive activity was situated upon it, perhaps as an embarkation point for the river.
				Extractive pit / natural feature	E	HS2 LiDAR 2012	Possible brickearth pits (on Gault formation bedrock) visible as irregularly-shaped hollows beside the river. The curvilinear nature of some of these pits suggests that they may have originated as stream meanders which could later have been developed as extractive pits.
				Spoil heap	E	HS2 LiDAR 2012	Mounds which may be spoil heaps associated with the possible brickearth pits just to the south-east. Alternatively, they may be associated with modern agricultural activity.
K13	344509	0041400000	MD / PM	Moat	E	HS2 LiDAR 2012	Possible southern corner of the moat is not on the modern or historic OS maps. Shows on the LiDAR as a clear, shallow, rectilinear depression. Part-utilised by drive into farmyard.
							Several sections of a medieval or post-medieval moat are visible on LiDAR as extant earthworks.
				Boundary bank	E	HS2 LiDAR 2012	Bank flanking north-eastern side of medieval or post-medieval fishpond, and separating it from the moat to the east. It is possible this may be the result of later landscaping.
				Fishpond	E	HS2 LiDAR 2012	Possible fishpond recorded on early OS maps, but not to level of detail visible on the 2012 LiDAR.
K14	N/A	0247100000	MD	Field boundary / boundary bank	E	HS2 LiDAR 2012	Linear bank visible as an earthwork on the western side of the possible fishpond, with which it may be associated; alternatively, it may be later in origin.
				Fishpond	E	HS2 LiDAR 2012	Possible fishpond clearly visible on LiDAR as well-defined earthworks. Presently dry, revealing the presence of a two-tiered internal island, as is common in medieval fishponds.
K15	N/A	0112401000 / 0112401001	MD / PM	Deserted settlement	E	HS2 LiDAR 2012	Possible settlement remains are visible on LiDAR as a collection of irregular earthworks which may represent house platforms, tofts and crofts, hollow ways, boundary banks and ditches. May continue to north-east, but not mapped beyond study area boundary.
K16	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A possible extractive pit is visible at the edge of the study area as a shallow, smooth-edged depression. Not recorded on historic OS maps. On limestone, so may alternatively be a natural feature such as a doline/solution hollow.
K17	N/A	N/A	MD / PM	Coaxial field system / field boundary bank	E	HS2 LiDAR 2012	Boundary banks visible on LiDAR as diffuse linear earthworks extend across four large modern fields. On same alignment as current field boundaries, so thought to be medieval or post-medieval, rather than earlier. Many findspots in the vicinity (see HER).
							Possible further boundary banks connected with the field system to the south-west, also visible on LiDAR as linear earthworks. These two are much more faintly visible than the other examples in this possible overall group. Not on historic OS maps.
				Field boundary / boundary bank	E	HS2 LiDAR 2012	A former field boundary is visible on LiDAR as a linear earthwork. Not recorded on modern or historic OS maps.
K18	N/A	N/A	UN	Boundary ditch / enclosure ditch	C	Pan-Government Agreement SP8111 13-APR-2010	Curvilinear ditch visible as a cropmark. Form not diagnostic: could be either a trackway or a boundary/enclosure ditch. Findspots of prehistoric to post-medieval artefacts in area. Not clear if associated with adjacent coaxial field system.
K19	N/A	N/A	MD / UN	Field boundary / boundary	E	HS2 LiDAR 2012	Possible early field boundaries visible as linear earthworks. Appear to be cut in places by ridge and furrow, but this relationship is unclear as all the earthworks are so faintly extant. Banks continue into adjacent fields. Not on historic

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
				bank			OS maps.
				An extremely faintly extant former boundary bank is just visible on LiDAR as a linear earthwork. Continues in the fields on either side to the north and south. Not recorded on historic OS maps.			
				A linear bank is visible on LiDAR as an earthwork. Not on historic OS maps. Adjacent to a much more faintly extant bank which appears to continue from the next field.			
				A former field boundary bank is visible on LiDAR as an earthwork. Likely to have formed part of a network of other field boundaries also visible on LiDAR. Continuation from field to the south. Not on historic OS maps. In former orchard.			
				A former field boundary bank is visible on LiDAR as an earthwork. Likely to have formed part of a network of other field boundaries also visible on LiDAR in the vicinity. Cut slightly at one point by a later quarry pit (K21).			
				Field boundary / rectangular enclosure	E	HS2 LiDAR 2012	Possible early field boundaries visible as earthworks. Appear to be cut in places by later ridge and furrow. Network of banks forms a rectilinear enclosure, so earlier origin also possible. Banks continue into adjacent fields. Not on historic OS maps.
				Field boundary / sub-rectangular enclosure	E	HS2 LiDAR 2012	Possible early field boundary banks visible on LiDAR as linear earthworks. Appear to be cut in places by later ridge and furrow. Network of banks forms a sub-rectangular enclosure, so earlier origin also possible. Banks continue into adjacent field.
K20	N/A	0409400000	PM	Brickworks / brickearth pit	E	HS2 LiDAR 2012	Site of 19th century brickworks visible as uneven earthworks across this field. 1st–3rd edition OS maps show extent of brickworks gradually expanding. Included brickearth pits. Site of kilns now a hollow occupied by farm buildings in centre of field. The survey did not identify any definable features that were not already recorded on historic OS mapping.
K21	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Former extractive pits are visible on LiDAR as large hollows within this field. Likely to have been quarrying the underlying Portland Stone. Not recorded on historic OS maps.
K22  (within asset groping SMA050)	342739	0074400000	PM	Icehouse	E	HS2 LiDAR 2012	LiDAR shows a mound consisting of several levels or parts. This is the site of a former icehouse. Modern and historic OS maps show a circular mound. The full extent and shape of the feature is different to the mapped mound, which is why it has been transcribed here.
K23	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A probable former extractive pit is visible on LiDAR as an extant hollow beneath an area of woodland at the southern end of the landscaped grounds of Hartwell House. Probably for the underlying Portland Stone. Not on historic OS maps.
K24	869743	0431500000	PM	Windmill mound	E	HS2 LiDAR 2012	Sub-circular mound visible on LiDAR. Appears to sit on top of ridge and furrow earthworks visible all around it. HER and national record of the historic environment suggest windmill mound. Marked on 1st edition OS map, but not to full extent. Later maps show ponds here.
K25	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A former field boundary bank is visible on LiDAR as a linear earthwork. Not recorded on historic OS maps. Appears to be cut by later ridge and furrow.
K26	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A former field boundary bank is visible on LiDAR as a rectilinear bank. Not on historic OS maps. Appears to surround an area of ridge and furrow.
K27	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A possible former quarry pit is visible on LiDAR as an elongated hollow beneath trees on the edge of the golf course. May alternatively be a disused golf course feature.
K28	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A former field boundary bank is visible on LiDAR as a linear earthwork. Not on historic OS maps. Appears to be cut by later ridge and furrow.
K29	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A former field boundary bank is visible on LiDAR as a linear earthwork. Not on historic OS maps. Appears to be cut by later ridge and furrow.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
			MD / PM / C20	Field boundary / demolition debris	E	HS2 LiDAR 2012	Oblong mound which appears to sit on top of the ridge and furrow. Possible former field boundary bank, perhaps with the addition of demolition debris from the buildings that used to lie just to the south (on historic OS maps).
K30	342700	0225000000	MD / PM / UN	Rectangular enclosure	E	HS2 LiDAR 2012	A partially-complete rectangular banked enclosure. Part of northern edge, adjacent to current field boundary, not visible. Eastern bank cut by ridge and furrow. Possible medieval field boundary or stock enclosure. Earlier origin also possible.
K31 (SMA075)	N/A	0085304000	RO / MD / PM	Road / trackway	C / E	Pan-Government Agreement SP7714 13-JUN-2003 / HS2 LiDAR 2012	Length of possible minor Roman road showing as a light mark in ploughsoil. LiDAR reveals there is still some slight height to this feature. 1st edition OS map records a trackway here, but this could be re-use of an earlier route.
K32	N/A	N/A	RO / MD / PM	Building / extractive pit	C	Pan-Government Agreement SP7714 13-JUN-2003	Irregularly-shaped light mark in ploughsoil may indicate levelled remains of former structure. Adjacent to a stretch of possible Roman road, so may be associated with this. May alternatively be related to gravel extraction for the road itself.
K33	N/A	N/A	RO / PM / UN	Pond / extractive pit	C	Pan-Government Agreement SP7714 13-JUN-2003	Light mark in ploughsoil may be a pond similar to the one indicated just to the north on the 1st edition OS map. May alternatively have been a quarry pit for gravel extraction associated with road construction (on superficial band of sand and gravel).
K34 (SMA008)	342700	0225000000	MD / PM	Boundary ditch / hollow way	E	HS2 LiDAR 2012 / Cambridge University Collection of Aerial Photography ACV055 24-APR-1961	Boundary or drainage ditches and a possible hollow way. Some cut ridge and furrow. Some form possible enclosures, or surround possible house platforms. Many Roman finds here, but seems likely that the ditches relate to medieval/post-medieval settlement.
				Ditched enclosure / circular enclosure	C	Cambridge University Collection of Aerial Photography ACV055 24-APR-1961	Possible circular ditched enclosure visible as a cropmark. Appears to sit within square ditched enclosure. May be part of the area of possible medieval/post-medieval settlement, or may have earlier origins related to the large amount of Roman finds from the vicinity.
				Ditched enclosure / rectangular enclosure	C	Cambridge University Collection of Aerial Photography ACV055 24-APR-1961	Possible rectilinear ditched enclosure visible on the north-eastern side of this group of features. May be part of the area of possible medieval/post-medieval settlement, or may have earlier origins related to the large amount of Roman finds from the vicinity.
K35 (SMA079)	N/A	0614007000	RO / MD	Road / field boundary	E	HS2 LiDAR 2012	Length of possible minor Roman road visible as a linear earthwork on LiDAR, spanning two fields. Ridge and furrow cuts into it (but hasn't levelled it) in the eastern field. May alternatively be a field boundary bank.
K36	342697	0066301000	MD / PM	Windmill mound	E	HS2 LiDAR 2012	Possible windmill mound visible as flat-topped mound surrounded by a shallow ditch, with parts of an outer bank beyond that. Tree on top masks any possible cross-tree remains. National record of the historic environment record notes it may alternatively be a tree mound.
K37	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	Possible field boundary bank visible as faintly extant linear earthwork. Not on historic OS maps. Similar to nearby possible Roman road remains (K35, K38), but more likely to be a field boundary as it exhibits the reverse-s shape of ridge and furrow.
K38	992825	N/A	RO / MD / PM	Road / field boundary	E	HS2 LiDAR 2012	A substantial linear earthwork may be the remains of a former field boundary bank. Not recorded on historic OS maps. May alternatively represent a former road, as very similar in appearance to nearby possible Roman road remains.
				Field boundary / boundary bank	C	Pan-Government Agreement SP7715 13-APR-2010	A further section of linear earthwork visible as a light cropmark. Not recorded on OS maps. There is the possibility that this may be another length of minor Roman road, although it seems more likely to be a former field boundary. Continues to the south-west.
K39	N/A	N/A	MD / PM	Road / trackway	C	Cambridge University Collection of Aerial Photography ACV055 24-APR-1961 / Pan-Government Agreement SP7714 13-JUN-	Length of possible road or trackway visible as a light mark in ploughsoil. 1st edition OS map records a trackway here, but does not depict the curvilinear southern section. LiDAR shows no height remaining. Appears to lead from area of possible deserted medieval settlement to the south towards adjacent windmill mound and beyond. May have provided possible cart/packhorse access to the windmill. Northern section appears likely cross over the route of Akeman Street, so a Roman period interpretation is unlikely.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
						2003 / HS2 LiDAR 2012	
K40 (SMA076)	1329566	0203400000	RO	Road	C	Cambridge University Collection of Aerial Photography RC8H1272 12-MAR-1985	Several sections of Akeman Street are visible as dark cropmarks of the flanking roadside ditches across three large fields. In this section, the ditch on the north-eastern side of the road is extremely faintly visible. No trace of the agger.
						Pan-Government Agreement SP7615 13-JUN-2003	A short stretch of roadside ditch flanks the southern side of the central agger of Roman Akeman Street. Visible here on aerial photographs as an indistinct dark cropmark against the lighter cropmark of the agger.
						Pan-Government Agreement SP7615 13-JUN-2003 / HS2 LiDAR 2012	The central agger of Roman Akeman Street is visible here as a light cropmark. LiDAR indicates that some slight height remains in a straight line across this field, along the route of the road, although it is barely perceptible.
						Pan-Government Agreement SP7715 13-APR-2010	Several sections of Akeman Street are visible as the dark cropmarks of the flanking roadside ditches across three large fields. In this section, the ditch on the south-western side of the road is more strongly visible than that to the north-west. No trace of the agger.
							Several sections of Roman Akeman Street are visible as the dark cropmarks of the flanking roadside ditches across three large fields. In this section, two parallel ditches are visible. No trace of the central agger.
							Several sections of Roman Akeman Street are visible as the dark cropmarks of the flanking roadside ditches across three large fields. This is a tenuous interpretation, as the cropmarks in this section are not quite on the correct alignment.
							Several sections of Roman Akeman Street are visible as the dark cropmarks of the flanking roadside ditches across three large fields. In this section, it appears only the ditch on the south-western side of the road is visible. No trace of the agger.
K41	N/A	N/A	MD / PM	Field boundary / boundary bank	C	Pan-Government Agreement SP7715 13-APR-2010	Possible former boundary bank. Continues beyond study area boundary to east-north-east. Shows as dark cropmark, but mapped as a bank as other dark cropmarks within this field have been shown by the LiDAR to have some height (cropmark reversal).
					E	HS2 LiDAR 2012	Several sections of possible former boundary banks are visible on LiDAR. This bank section bounds an area of ridge and furrow. Some other banks showing on the LiDAR are recorded on the historic OS maps and so are not transcribed here.
							Several sections of possible former field boundary banks are visible on LiDAR. Very slight earthworks, with the cropmark of a Roman road (K40) just showing through two of them on aerial photographs.
K42	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	Possible former field boundary bank visible as a degraded and fragmentary linear earthwork. Not recorded on historic OS maps. Leads towards Roman Akeman Street to the south, so may have been associated with the former thoroughfare.
K43 (SMA054)	342764	N/A	MD	Deserted settlement	E	HS2 LiDAR 2012	An area of extremely confused, degraded and disrupted earthworks is visible on LiDAR. Most are likely to be modern landscaping associated with the golf course or slightly earlier field drains. Some may be medieval settlement features.
K44 (SMA054)	342764	0243401000	MD	Deserted settlement / drainage system	E / LE	Cambridge University Collection of Aerial Photography SG093 08-APR-1956 / HS2 LiDAR 2012	An interconnecting network of drainage ditches and channels which may have defined plots within an area of possible medieval settlement are visible as a mixture of extant and levelled earthworks.
				Deserted settlement / house platform	E / LE	Cambridge University Collection of Aerial Photography SG093 08-APR-	Possible medieval house platform visible on imagery of 1956 as a slightly raised uneven earthwork. Surrounded by ditches. Adjacent to three possible very small moats or house platforms. Disrupted by golf course landscaping by time of 2012 LiDAR.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
						1956 / HS2 LiDAR 2012	
				Moat / house platform	E	Cambridge University Collection of Aerial Photography SG093 08-APR-1956 / HS2 LiDAR 2012	Possible small rectangular medieval moat visible on oblique aerial photograph of 1956. Modified slightly by time of 2012 LiDAR by the widening and deepening of the south-eastern side to serve as a drain for the golf course. Two even smaller possible moats to the south-east.
							Possible very small rectangular medieval moat visible on aerial photograph of 1956. Modified slightly by time of 2012 LiDAR by the widening and deepening of the north-western side to serve as a drain for the golf course. Larger possible moat to the north-west.
							Possible very small medieval moat or house platform visible on aerial photograph of 1956. Only just visible by time of 2012 LiDAR, when it appears to have been slightly modified in shape. Larger possible moat to the north-west.
K45 (SMA054)	342764	0003600000	MD	Deserted settlement / fishpond	E / LE	Cambridge University Collection of Aerial Photography SG093 08-APR-1956 / HS2 LiDAR 2012	A possible medieval fishpond is visible on an aerial photograph of 1956. Masked by golf course landscaping by time of 2012 LiDAR. May have been associated with contemporary possible moats and other earthworks to the south-west.
				Deserted settlement / boundary bank	E / LE	Cambridge University Collection of Aerial Photography SG093 08-APR-1956 / HS2 LiDAR 2012	Central section of former possible boundary bank is still extant. Both ends levelled by creation of landscaped elements of golf course. Not on historic OS maps. Possibly part of the area of deserted settlement and/or associated with the fishpond.
K46 (SMA054)	342764	N/A	MD / PM	Water meadow / drainage system	C	NMR EA-AF-97C-682 8310 20-MAR-1997	An interconnecting network of ditches and channels which may have formed a possible early water meadow is visible partly as cropmarks on vertical aerial photographs of 1997 amongst the landscaping of the golf course.
					E / LE	Cambridge University Collection of Aerial Photography SG093 08-APR-1956 / HS2 LiDAR 2012	An interconnecting network of ditches and channels which may have formed a possible early water meadow is visible on early aerial photographs as earthworks. Some elements levelled by the 2012 LiDAR.
K47	344217	0093800000	MD / PM	Field boundary / boundary ditch	E	NMR RAF-106G-UK-683 4048 23-AUG-1945 / HS2 LiDAR 2012	A possible former boundary or drainage ditch is visible as an earthwork. Visible across several fields. Not recorded on historic OS maps.
				Field boundary / boundary bank	E	HS2 LiDAR 2012	A possible former field boundary bank is visible on LiDAR as a wide linear earthwork. Extensive width probably due to the process of plough-levelling. Not on historic OS maps. Flanked by an accompanying ditch on its south-eastern side.
				Field boundary / boundary ditch	C	NMR EA-AF-97C-702 1340 01-APR-1997	A linear ditch is visible on vertical aerial photographs of 1997 as a strong cropmark. Flanks the south-eastern side of a bank which is still slightly extant. Together, they may have constituted a former field boundary bank. Not recorded on historic OS maps.
K48 (SMA012)	344491	0041500000	MD	Moat	E/ LE	NMR RAF-CPE-UK-1897 3061 12-DEC-1946 / NMR RAF-106G-UK-683 4046 23-AUG-1945 / HS2 LiDAR 2012	A square moat is visible on early vertical aerial photographs as earthworks. Channels connect to the eastern and western corners. Northern corner of central mound extends out into the moat. Levelled by the time of the 2012 LiDAR.
			MD / PM	Water supply and drainage	E / LE	NMR RAF-CPE-UK-1897 3061 12-DEC-1946 / NMR RAF-106G-UK-683 4046 23-AUG-1945 / HS2 LiDAR 2012	A wide flat-bottomed channel, with slight banks on either side is visible just to the north-west of the moat. May have been connected/contemporary with the moat. Not on historic OS maps.
K49	N/A	N/A	PM / UN	Drainage system	E / LE	NMR RAF-106G-UK-717 4080 26-AUG-1945 / HS2 LiDAR 2012	Network of drainage ditches. One cuts earlier ridge and furrow, while another appears to bound an area of ridge and furrow. One appears to link to the possible moat (K04), which could be later re-use of the earlier channel. Not on historic OS maps.
K50	N/A	N/A	PM / UN	Extractive pit / natural	C	NMR EA-AF-97C-702 1340 01-	Possible brickearth pits (on Gault formation bedrock) visible as crisp dark cropmarks beside the river. The curvilinear nature of one of these pits suggests they may have originated as stream meanders which could later have been

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
				feature		APR-1997	developed as extractive pits.
K51	N/A	N/A	MD / PM	Ridge and furrow	E / LE	NMR RAF-106G-UK-717 4080 26-AUG-1945 / HS2 LiDAR 2012	Ridge and furrow which was faintly extant on vertical aerial photographs of 1945 appears to have been levelled by the time of the 2012 LiDAR.
K52	N/A	N/A	MD / PM	Ridge and furrow	E / LE	NMR RAF-106G-UK-717 4080 26-AUG-1945 / HS2 LiDAR 2012	Ridge and furrow which was faintly extant on vertical aerial photographs of 1945 appears to have been levelled by the time of the 2012 LiDAR. Cut by a later drainage channel.
						NMR RAF-58-8419 0064 14-NOV-1967 / HS2 LiDAR 2012	Ridge and furrow visible as earthworks on vertical aerial photographs of 1967 appears to have been levelled by the time of the 2012 LiDAR.
K53	N/A	N/A	MD / PM	Ridge and furrow	E / LE	NMR RAF-106G-UK-683 4048 23-AUG-1945 / HS2 LiDAR 2012	Ridge and furrow visible on vertical aerial photographs of 1945 as extant earthworks appears to have been levelled by the time of the 2012 LiDAR.
K54	N/A	N/A	MD / PM	Ridge and furrow	C	Pan-Government Agreement SP8209 13-APR-2010	Levelled ridge and furrow is clearly visible as cropmarks across this field.
						Pan-Government Agreement SP8309 13-JUN-2003	Levelled ridge and furrow is just visible as cropmarks across this small field.
					E	HS2 LiDAR 2012	Possible ridge and furrow is just visible on LiDAR as barely-surviving earthworks within this field.
							Ridge and furrow is visible as earthworks on LiDAR. Slightly degraded towards the south-western ends of both fields, but still visible.
							A small fragment of ridge and furrow is visible on LiDAR as earthworks within the garden of Brook Farm.
							Ridge and furrow is visible across this field as extant earthworks. Appears to have been cut by later extractive pits on the north-eastern side.
						Pan-Government Agreement SP8309 13-JUN-2003 / HS2 LiDAR 2012	Faintly extant ridge and furrow is just visible as earthworks on aerial photographs and LiDAR.
					E / LE	NMR RAF-CPE-UK-1897 3061 12-DEC-1946 / HS2 LiDAR 2012	Ridge and furrow which was extant at the time of vertical aerial photographs of 1946 appears to have been levelled by the time of the 2012 LiDAR.
					E / LE / DM	NMR RAF-106G-UK-717 4043 26-AUG-1945 / HS2 LiDAR 2012	Ridge and furrow visible on vertical aerial photographs of 1945 as extant earthworks appears to have been levelled by the time of the 2012 LiDAR. The south-eastern half has been destroyed by construction of a small close of houses.
K55	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Ridge and furrow is visible as extant earthworks on LiDAR.
K56	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Ridge and furrow is visible as extant earthworks across this field. Not very well preserved, and particularly heavily degraded on the south-western side of the field, near the river.
K57	N/A	N/A	MD / PM	Ridge and furrow	C	Cambridge University Collection of Aerial Photography RC8HJo83 12-MAR-1985	Two areas of levelled ridge and furrow are visible on aerial photographs of 1985 as cropmarks. Both continue to the north-east beyond the boundary of the study area.
					E	HS2 LiDAR 2012	Ridge and furrow is visible on LiDAR as extant earthworks across this small field beside the river.
							Ridge and furrow is visible on LiDAR as extant earthworks. Continues across the remainder of the field to the north-east, but not mapped beyond the boundary of the study area.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
K58	N/A	N/A	MD / PM	Ridge and furrow	C	Pan-Government Agreement SP8210 13-JUN-2003	Levelled ridge and furrow is visible across this field as cropmarks.
						Pan-Government Agreement SP8210 23-APR-2010	Levelled ridge and furrow is visible as cropmarks on vertical aerial photographs. Cut by a modern field boundary.
					E	HS2 LiDAR 2012	A small area of degraded but extant ridge and furrow is visible as earthworks on LiDAR in the northern end of this field.
							Possible ridge and furrow is just visible as faintly extant earthworks across this field.
							Ridge and furrow is visible across this field as extant earthworks.
					E / LE	NMR RAF-CPE-UK-1897 3061 12-DEC-1946 / HS2 LiDAR 2012	Ridge and furrow which was extant at the time of vertical aerial photographs of 1946 appears to have been levelled by the time of the 2012 LiDAR.
K59	N/A	N/A	MD / PM	Ridge and furrow	E / LE	NMR RAF-106G-UK-717 4041 26-AUG-1945 / HS2 LiDAR 2012	Ridge and furrow visible on vertical aerial photographs of 1945 as extant earthworks appears to have been levelled by the time of the 2012 LiDAR. Continues to the north-east, beyond the edge of the study area boundary.
K60	N/A	N/A	MD / PM	Ridge and furrow	C	NMR EA-AF-97C-704 1340 01-APR-1997	Levelled ridge and furrow is visible on vertical aerial photographs of 1997 as cropmarks.
						Pan-Government Agreement SP8210 23-APR-2010	Levelled ridge and furrow is faintly visible on vertical aerial photographs of 2010 as cropmarks.
					E	HS2 LiDAR 2012	Well-preserved ridge and furrow is clearly visible on LiDAR as extant earthworks. Likely to continue across the remainder of the field to the south-west, but not mapped beyond the boundary of the study area.
							Ridge and furrow is faintly visible as extant earthworks across this field. Likely to continue across the remainder of the field to the south-west, but not mapped beyond the boundary of the study area.
							Ridge and furrow is visible on LiDAR as diffuse earthworks across this field. Almost levelled.
K61	N/A	N/A	MD / PM	Ridge and furrow	E	Pan-Government Agreement SP8209 13-APR-2010	Ridge and furrow is visible as extant earthworks across this field. Only a thin sliver mapped as the transcription does not extend beyond the boundary of the study area.
K62	N/A	N/A	MD / PM	Ridge and furrow	C	Pan-Government Agreement SP8210 23-APR-2010	Levelled ridge and furrow is faintly visible as cropmarks on vertical aerial photographs of 2010. Continues across the remainder of the field, but not mapped beyond the boundary of the study area.
					E / LE	Cambridge University Collection of Aerial Photography RC8HJ077 12-MAR-1985 / HS2 LiDAR 2012	Ridge and furrow visible as slight earthworks on vertical aerial photographs of 1985; under an area of modern development by the time of the 2012 LiDAR.
K63	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Ridge and furrow is faintly visible as almost levelled earthworks. Appears to cut two earlier linear banks, although the earthworks are so faint that this is slightly ambiguous. Bisected by a later bank (not mapped as on old OS maps).
					E / LE	NMR RAF-CPE-UK-1897 4063 12-DEC-1946 / HS2 LiDAR 2012	Ridge and furrow which was extant at the time of vertical aerial photographs of 1946 appears to have been levelled by the time of the 2012 LiDAR.
K64	N/A	N/A	MD / PM	Ridge and furrow	C	Cambridge University Collection of Aerial Photography RC8HJ077 12-MAR-1985	Levelled ridge and furrow is visible on vertical aerial photographs of 1985 as cropmarks.
K65	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Ridge and furrow is very faintly visible as extant earthworks. Not clear whether it cuts the extant field boundaries as

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
							the earthworks are too subtle and diffuse to be certain of the relationship.
K66	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	Field boundary bank visible on LiDAR as faintly extant earthwork. Joins another former field boundary bank to the west, which runs parallel to the stream; this latter boundary is on the 1st edition OS map though, so was not mapped by the current project.
				Ridge and furrow	C	Cambridge University Collection of Aerial Photography RC8HJo77 12-MAR-1985	Levelled ridge and furrow is visible on vertical aerial photographs of 1985 as cropmarks.
					E	HS2 LiDAR 2012	Ridge and furrow is visible on LiDAR as faintly extant earthworks. Confined within a boundary bank which is also visible on the LiDAR as an earthwork, and which has also been transcribed as a part of this project.
K67	N/A	N/A	MD / PM	Ridge and furrow	C	Cambridge University Collection of Aerial Photography RC8HJo77 12-MAR-1985	Levelled ridge and furrow is visible on vertical aerial photographs of 1985 as cropmarks amongst field boundaries that are still faintly extant on the 2012 LiDAR.
					E	HS2 LiDAR 2012	Ridge and furrow is faintly visible as earthworks. Appears to lie on top of an earlier field system or banked enclosure.
							Ridge and furrow is visible on LiDAR as extant earthworks. Much more strongly visible in a central strip across the field. Less strongly visible elsewhere, but still just discernible.
							Ridge and furrow is very faintly visible on LiDAR as only just extant earthworks across this field. Appears to sit on top of earlier field boundary banks which are also still extant, although this is uncertain as the earthworks are all so diffuse.
							Very well-preserved ridge and furrow is visible on LiDAR as extant earthworks. Partly covered by trees at the eastern end, but visible on LiDAR through the tree cover.
							A possible small area of ridge and furrow is visible as earthworks on LiDAR. Not mapped beyond the edge of the study area boundary.
					E / LE	Cambridge University Collection of Aerial Photography RC8HJo77 12-MAR-1985 / HS2 LiDAR 2012	Ridge and furrow which was visible on vertical aerial photographs of 1985 as faint earthworks appears to have been levelled by the time of the 2012 LiDAR.
K68	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Possible ridge and furrow earthworks are faintly visible on LiDAR in the small field or paddock to the rear of Hartwell Cottage.
K69	N/A	N/A	MD / PM	Ridge and furrow	E / LE	NMR RAF-CPE-UK-2436 3081 04-FEB-1948 / HS2 LiDAR 2012	Ridge and furrow visible as earthworks on vertical aerial photographs of 1948 appears to have been levelled by the time of the 2012 LiDAR.
K70  (Note: there are no features numbered K71-K79)	N/A	N/A	MD / PM	Field boundary / boundary bank / plough headland	E	HS2 LiDAR 2012	A former field boundary or plough headland is visible on LiDAR as an extant linear earthwork within the landscaped grounds of Hartwell House. Registered Park and Garden 1000192. Boundary not on historic OS maps.
				Ridge and furrow	C	Pan-Government Agreement SP8012 13-JUN-2003	Levelled ridge and furrow is strongly visible as cropmarks across the sports grounds on the eastern side of the Hartwell House grounds and golf course.
				Ridge and furrow	C	Pan-Government Agreement SP8012 13-JUN-2003	Levelled ridge and furrow is visible as cropmarks within the golf course on the eastern side of the Hartwell House grounds.
				Ridge and furrow	E	HS2 LiDAR 2012	Ridge and furrow is visible on LiDAR as extant earthworks within the landscaped grounds of Hartwell House (registered park and garden 1000192).
				Ridge and furrow	E	HS2 LiDAR 2012	Ridge and furrow is visible on LiDAR as extant earthworks within the landscaped grounds of Hartwell House



Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
							(registered park and garden 1000192). Ridge and furrow quite degraded here.
							Ridge and furrow is visible as extant earthworks within the grounds of Hartwell House (registered park and garden 1000192). Some areas within the golf course very well preserved, although cut in places by bunkers and ponds. Areas under tree cover less strongly visible.
						Pan-Government Agreement SP8012 13-JUN-2003	Ridge and furrow is visible on aerial photographs as extant earthworks in the rough ground on the eastern side of the sports pitches. Only a thin strip recorded as not mapped beyond the edge of the study area boundary.
K80	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Several small fragments of extant ridge and furrow are visible on LiDAR as earthworks amongst the landscaping of the golf course. Cut by later drains which may or may not be part of the golf course.
K81	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Several small fragments of extant ridge and furrow are visible on LiDAR as earthworks amongst the landscaping of the golf course. Cut by later drains which may or may not be part of the golf course.
K82	N/A	N/A	MD / PM	Ridge and furrow	E / LE	Cambridge University Collection of Aerial Photography SG093 08-APR-1956 / HS2 LiDAR 2012	A small area of ridge and furrow visible on an oblique aerial photograph of 1956 as extant earthworks appears to have been later partially levelled by golf course landscaping. Two small sections remain extant.
K83	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Several small fragments of extant ridge and furrow are visible on LiDAR as earthworks amongst the landscaping of the golf course. Cut by later drains which may or may not be part of the golf course.
					E / LE	Cambridge University Collection of Aerial Photography SG093 08-APR-1956 / HS2 LiDAR 2012	A small area of ridge and furrow visible on an oblique aerial photograph of 1956 as extant earthworks appears to have been levelled by golf course landscaping by the time of the 2012 LiDAR.
K84	N/A	N/A	MD / PM	Ridge and furrow	C	Cambridge University Collection of Aerial Photography RC8HJ006 12-MAR-1985	Levelled ridge and furrow is visible on vertical aerial photographs of 1985 as cropmarks.
						NMR EA-AF-97C-684 8102 01-APR-1997	Levelled ridge and furrow is clearly visible as cropmarks in this field on vertical aerial photographs of 1997, before the golf course expanded into this area. Continues east beyond the boundary of the study area.
						NMR RAF-CPE-UK-2008 3085 16-APR-1947 / Pan-Government Agreement SP7913 13-APR-2010	Ridge and furrow which was visible as extant earthworks on vertical aerial photographs of 1947 appears to have been levelled by the time of the 2012 LiDAR by the golf course landscaping.
						Pan-Government Agreement SP7913 13-APR-2010	Levelled ridge and furrow is visible as cropmarks on aerial photographs. Not mapped beyond the edge of the study area boundary.
							Levelled ridge and furrow is visible as strong cropmarks right across this field.
						Pan-Government Agreement SP7913 13-JUN-2003	A small fragment of levelled ridge and furrow is visible within the golf course as cropmarks.
					C / E	Pan-Government Agreement SP7913 13-APR-2010 / HS2 LiDAR 2012	Ridge and furrow is visible as cropmarks right across this area of the golf course. Interrupted in places by putting greens, bunkers, ponds, etc., of the golf course. LiDAR shows there is still some height to the ridges.
					E	HS2 LiDAR 2012	A small corner of extant ridge and furrow is visible on LiDAR at the edge of the study area. Not mapped beyond the study area boundary.
					E / LE	NMR RAF-CPE-UK-2008 3085 16-APR-1947 / HS2 LiDAR	Ridge and furrow which was extant at the time of vertical aerial photographs of 1947 appears to have been levelled by the time of the 2012 LiDAR.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
						2012	
K85	N/A	N/A	MD / PM	Field boundary / boundary bank	E	Cambridge University Collection of Aerial Photography RC8HJ006 12-MAR-1985 / HS2 LiDAR 2012	A former field boundary bank is visible on vertical aerial photographs of 1985 as a linear earthwork. Still faintly extant on 2012 LiDAR. Northern end destroyed by an area of modern quarrying. Ridge and furrow goes over the top of it.
K86	N/A	N/A	MD / PM	Ridge and furrow	C	Cambridge University Collection of Aerial Photography RC8HJ006 12-MAR-1985	Levelled ridge and furrow is visible on vertical aerial photographs of 1985 as cropmarks.
					C / DM	Cambridge University Collection of Aerial Photography RC8HJ006 12-MAR-1985 / HS2 LiDAR 2012	Ridge and furrow which was visible on vertical aerial photographs of 1985 as cropmarks appears to have later been totally destroyed in these areas by golf course landscaping.
					E	HS2 LiDAR 2012	Ridge and furrow is visible on LiDAR as pronounced earthworks. Cut by the post-medieval Hartwell House tree avenue (on historic OS maps) and a field boundary which is now a trackway.
							Well-preserved ridge and furrow is visible on LiDAR as extant earthworks.
					E	Pan-Government Agreement SP7914 13-APR-2010 / HS2 LiDAR 2012	Ridge and furrow is visible at the very northern end of the golf course. Some areas are still extant, while some have been cut by golf course landscaping features and/or a trackway leading to an area of modern development.
					E / LE	Cambridge University Collection of Aerial Photography RC8HJ006 12-MAR-1985 / HS2 LiDAR 2012	Ridge and furrow which was visible on vertical aerial photographs of 1985 as extant earthworks between the tree avenue had been levelled by the time of the 2012 LiDAR.
						NMR RAF-CPE-UK-2008 3085 16-APR-1947 / HS2 LiDAR 2012	Ridge and furrow which was extant at the time of vertical aerial photographs of 1947 appears to have been levelled by the time of the 2012 LiDAR.
						Pan-Government Agreement SP7814 13-JUN-2003 / HS2 LiDAR 2012	Ridge and furrow which is visible on vertical aerial photographs of 2003 as extant earthworks appears to have been levelled by the time of the 2012 LiDAR. Alternatively, may be masked by river alluvium.
						Pan-Government Agreement SP7913 13-APR-2010 / HS2 LiDAR 2012	Ridge and furrow visible on vertical aerial photographs of 2010 as earthworks appears to have been levelled by construction work by the time of the 2012 LiDAR.
K87	N/A	N/A	MD / PM	Ridge and furrow	C	Cambridge University Collection of Aerial Photography RC8HJ006 12-MAR-1985	Levelled ridge and furrow is visible on vertical aerial photographs of 1985 as cropmarks.
						NMR RAF-CPE-UK-2008 3088 16-APR-1947	Levelled ridge and furrow is just visible as faint cropmarks on vertical aerial photographs of 1947.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
					E	HS2 LiDAR 2012	Ridge and furrow is visible as extant earthworks in the corner of this field. Likely to continue to the south-west across the remainder of the field, but not mapped beyond the boundary of the study area.
							Possible ridge and furrow is visible as very faint earthworks on LiDAR.
							Well-preserved ridge and furrow is visible as earthworks on LiDAR. Appears to cut an earlier boundary bank. Not mapped beyond the edge of the study area boundary.
							Ridge and furrow is visible across this field as extant earthworks. Appears to cut a probably slightly earlier rectangular enclosure in the north-western corner of the field.
							Generally very well-preserved ridge and furrow visible on LiDAR as earthworks across this field. Disturbed/destroyed in places by later pond, trackways and pipe trenches, but crisply-defined where it survives.
							A fragment of poorly-preserved ridge and furrow is just visible as earthworks on LiDAR beneath a patch of trees.
							Well-preserved ridge and furrow is visible across this field as earthworks on LiDAR. Interrupted at two points by modern trackway. Appears to overlie bank indicating the course of a Roman road. Continues to the east beyond the project boundary.
					E / LE	Cambridge University Collection of Aerial Photography ACV055 24-APR-1961 / HS2 LiDAR 2012	Ridge and furrow which appeared to be slightly extant on oblique aerial photographs of 1961, cutting into the road/bank recorded as K31. Appears to have been levelled by the time of the 2012 LiDAR.
						NMR RAF-CPE-UK-2008 3086 16-APR-1947 / HS2 LiDAR 2012	Ridge and furrow which was extant at the time of vertical aerial photographs of 1947 appears to have been levelled by the time of the 2012 LiDAR.
						NMR RAF-CPE-UK-2008 3088 16-APR-1947 / HS2 LiDAR 2012	Possible ridge and furrow is visible across this field as very faintly extant earthworks on vertical aerial photographs of 1947. Appears to have been levelled by the time of the 2012 LiDAR.
K88	N/A	N/A	MD / PM	Plough headland	E	HS2 LiDAR 2012	Several areas of ridge and furrow and a possible plough headland are visible as a combination of cropmarks and earthworks within what is now a single large field.
				Ridge and furrow	C	HS2 Hyperspectral 2012 (Run 4R Bands 7, 8, 9)	Several areas of ridge and furrow and a possible plough headland are visible as a combination of cropmarks and earthworks within what is now a single large field.
						Pan-Government Agreement SP7616 13-JUN-2003	Levelled ridge and furrow is visible as cropmarks within this field. Bounded on its eastern side by a former field boundary bank which is still visible as an earthwork on LiDAR.
						Pan-Government Agreement SP7715 13-APR-2010	Levelled ridge and furrow is visible on vertical aerial photographs of 2010 as cropmarks.
					C / E	HS2 Hyperspectral 2012 (Run 4R Bands 7, 8, 9) / HS2 LiDAR 2012	Several areas of ridge and furrow and a possible plough headland are visible as a combination of cropmarks and earthworks within what is now a single large field.
						Pan-Government Agreement SP7616 13-APR-2010 / HS2 LiDAR 2012	Ridge and furrow is visible within these two long narrow fields as cropmarks. LiDAR of 2012 shows there is still some slight height to the earthworks.
					E / LE	NMR RAF-CPE-UK-2008 3088 16-APR-1947 / HS2 LiDAR 2012	Ridge and furrow visible as extant earthworks on vertical aerial photographs of 1947 appears to have been levelled by the time of the 2012 LiDAR. The cropmarks of Akeman Street, which are clearer on later photographs, can just be seen in 1947.
						NMR RAF-CPE-UK-2008 4089 16-APR-1947 / HS2 LiDAR	Possible ridge and furrow is visible across this field as very faintly extant earthworks on vertical aerial photographs of 1947. Appears to have been levelled by the time of the 2012 LiDAR.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
						2012	
						NMR RAF-CPE-UK-2436 4112 04-FEB-1948 / HS2 LiDAR 2012	Ridge and furrow visible as earthworks on vertical aerial photographs of 1948 appears to have been levelled by the time of the 2012 LiDAR.
K89	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A possible former field boundary is visible on LiDAR as a linear earthwork. Not recorded on historic OS maps.
K90	N/A	N/A	MD / PM	Ridge and furrow	E / LE	Cambridge University Collection of Aerial Photography RC8HI272 12-MAR-1985 / HS2 LiDAR 2012	Ridge and furrow which appeared to be slightly extant on vertical aerial photographs of 1985 appears to have been levelled by the time of the 2012 LiDAR. Continues beyond study area boundary.
K91	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Ridge and furrow is clearly visible as extant earthworks across this field. Cut by a later trackway. Likely to continue to the north-east, but not mapped beyond the boundary of the study area.
K92	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	A small area of possible ridge and furrow is visible on LiDAR. May continue to the north-east, but not mapped beyond the boundary of the study area.

## 2.6 Results: interpretation

- 2.6.1 Ninety-two possible archaeological features were recorded from the remote sensed imagery that was surveyed as part of this project.
- 2.6.2 The majority of the features identified are likely to originate from the medieval or early post-medieval periods, and relate mostly to agriculture (predominately ridge and furrow cultivation and former field boundaries). Sites associated with Roman Akeman Street were recorded in the north-western end of the study area.
- 2.6.3 The survey identified cropmarks representing the levelled remains of Akeman Street (K40, SMA076). These follow the projected route of this former thoroughfare as indicated on OS mapping. For the most part, the flanking roadside ditches are the remaining visible indicators of the road. At the north-western end of the group of transcribed features, at the point where they reach the boundary of the study area, a possible short section of the agger (the embankment of the road) is also visible as a cropmark. Early aerial photographs show a field boundary/hedgerow at this point, but it is possible that it re-used the line of the faintly remaining agger as a convenient boundary point.
- 2.6.4 Features K31 (SMA075) and K35 (SMA079) represent possible lengths of minor Roman roads/trackways, which potentially joined with Akeman Street (SMA076). They are similar in appearance to medieval or post-medieval field boundary banks, but a possible Roman origin has been suggested in this instance due to apparent road remains having been observed in ploughsoil at these points (HER 0085304000, 0614007000). The presence of Fleet Marston Romano-British small town (national record of the historic environment 342692) to the north-west of Putlowes would also account for several converging route-ways of this period.
- 2.6.5 An area of light cropmarks (K32) is adjacent to the possible stretch of minor Roman road or trackway recorded as K31. These cropmarks may either represent the levelled remains of a roadside structure/building, or alternatively simply a backfilled gravel pit associated with construction of the road.
- 2.6.6 Medieval settlement remains at Putlowes have been recorded in both the national record of the historic environment (342700) and the HER (0225000000) on the basis of documentary evidence, although no remains have previously been identified at the site. The survey identified earthwork remains on the western side of Putlowes which may date from this period (K30, K34, SMA088). The pond on the southern side of the farm (which was not mapped by the current survey as it is already adequately recorded on both historic and modern OS maps) may have originally served as a fishpond for the settlement.
- 2.6.7 The possible medieval or post-medieval features mapped on the western side of Putlowes include a network of ditches which extends to the west, cutting earlier ridge and furrow (hence the possible post-medieval date). The largest of the ditches running through the main part of the site may have been a hollow way. Possible circular and rectilinear ditched enclosures are also visible. The rectilinear enclosure is of similar size and shape to the banked enclosure in the field to the south, recorded as K30.
- 2.6.8 These features have been given a medieval or post-medieval interpretation, as they are extant earthworks and finds from these periods have been recovered from this field. It should be noted, however, that prolific quantities of finds dating from the Bronze Age and Roman periods have also been recovered. It is therefore possible that this site had earlier origins, and that the features visible on the remote sensed sources might not all be contemporary with each other.
- 2.6.9 The survey mapped a possible medieval windmill mound (K36) in the field to the north-west of Putlowes. Feature K39 is a bank visible as a cropmark, which appears to lead from Putlowes to the windmill mound and beyond. This may have provided cart or packhorse access to the windmill.
- 2.6.10 The survey also recorded probable medieval settlement evidence in the south-eastern part of the study area (K04, SMA003). The area of former settlement around St Mary's Church, as well as the demolished church itself, are both clearly visible on the high resolution LiDAR imagery. The area of potential settlement extends into the small field to the north of the church site. The earthworks here were too diffuse to define, and have therefore been indicated by an extent-of-area polygon in the transcription.
- 2.6.11 Feature K09 represents part of a previously-recorded possible moat that may have been contemporary with the former settlement. K10 represents several possible fishponds alongside the river, which are also likely to be of the same date. The substantial ditch recorded as feature K47 may have been a hollow way leading to the moated site recorded at Stoke House (not visible on remote sensed sources).
- 2.6.12 A medieval moated site (K48, SMA012) was also visible on early aerial photographs as extant earthworks to the north-west of Brook Farm, on the south-western side of Stoke Mandeville. The 2012 LiDAR shows that this site has since been mostly levelled.
- 2.6.13 Further medieval remains were transcribed just to the north-west. Historic and modern OS mapping recorded the moat (K13) at Moat Farm. The remote sensed imagery revealed a greater extent and more detail, so the site was also mapped as part of this survey. Possible contemporary deserted settlement remains (K15), along with a fishpond (K14), were all clearly visible as earthworks just slightly further to the north-west.
- 2.6.14 An area of possible deserted medieval settlement is visible on the remote sensed sources as both extant and levelled earthworks within the golf course to the north-east of Hartwell House. The western half of this area falls within a Grade II\* registered park and garden (list entry number 1000192). These features include:
- three possible small moated sites grouped close together (K44, SMA054). The northernmost two of these have largely survived the golf course landscaping and can be clearly seen on the LiDAR. K44 also includes a network of connecting ditches which appear to link to the possible moats. Alternatively, these features could represent the post-medieval brickworks indicated here on a map of 1777 (HER 0243400000);
  - a possible fishpond transcribed to the north-east. This was visible as an earthwork on an oblique aerial photograph of 1956, but the site had been masked or destroyed by a golf course feature by the time of the 2012 LiDAR;
  - a possible early bedwork water meadow recorded just to the south-west. This small

interconnecting network of ditches does not form the classic 'herring-bone' pattern<sup>19</sup>, although they do appear to follow a loosely interlocking layout which might be indicative of a water meadow; and

- further subtle earthwork features visible across the site on the early aerial photographs (K43, SMA054). As most were too diffuse to be mapped, an extent-of-area polygon has been used to indicate the possible spread of these features (within the limits of the study area).

2.6.15 The survey also recorded a mound (K24) slightly further to the south-east within the Hartwell House golf course, apparently sitting on top of the ridge and furrow (K70) which is also visible across this area. It is possibly a medieval windmill mound; alternatively, it may be a landscape feature of the post-medieval park, such as a vantage point or tree mound.

2.6.16 The survey recorded a series of possible post-medieval brickearth pits (K12, SMA010) on the south-western side of Stoke Mandeville. The slightly curvilinear shape of some of these features suggests they may have originated as small meanders of the stream, which were possibly later worked for extraction of the underlying Gault Clay. A small rectilinear platform or banked area is visible amidst the pits on the bank of the stream. It is possible that this could have been an embarkation point for loading the extracted clay onto small boats or barges prior to transport along the river. Alternatively it could have accommodated a building or other structure associated with the extractive activity. As such it has been recorded as a possible building platform.

2.6.17 Approximately 3.3km further downstream (to the north-west), on the southern side of Hartwell House, lies the site of the post-medieval and 20th century brickworks (K20) that may have been the destination of the clay obtained from the brickearth pits. This is a tentative hypothesis; it may be coincidental that these sites are relatively close together.

2.6.18 The brickworks (K20) was known as Locke's Brickfield (HER 0409400000). The kilns and further brickearth pits visible on the early aerial photographs have all been adequately recorded on the 1st to 3rd edition OS maps of the area, which chart the gradual expansion of the site. All that remains today is an expanse of slightly uneven ground, which has been indicated by an extent-of-area polygon.

2.6.19 The landscape features of the Hartwell House Grade II\* registered park and garden (List Entry Number 1000192) which fell within the study area are all adequately recorded on the historic and modern OS maps, with the exception of the icehouse (K22, SMA050). The high resolution of the LiDAR imagery revealed a greater extent and level of detail for a feature that is otherwise concealed beneath tree cover. It was therefore transcribed from the LiDAR as part of this survey.

## 2.7 Conclusions

2.7.1 Ninety-two individual or grouped possible archaeological features were identified by the survey, 60 of which are not recorded in either the HER or the national record of the historic environment.

2.7.2 The identified features comprise in the most part the remains of medieval or early post-medieval agriculture (predominately ridge and furrow cultivation and former field boundaries). Other features include:

- sections of the Roman road known as Akeman Street;
- possible linking minor Roman roads or trackways and possible associated remains;
- several areas of deserted medieval settlement, including a demolished church, several moated sites and fishponds, and the remains of possible tofts and crofts and hollow ways;
- three possible medieval windmill mounds;
- post-medieval brickearth pits and possible associated brickworks; and
- a post-medieval icehouse within the grounds of Hartwell House.

## 2.8 References

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<sup>19</sup> Brown, G., (2005), *Irrigation of Water Meadows in England. Památky Archeologické - Supplementum 17, Ruralia 5*. P.88.

2.9 Historic aerial photographs consulted

Table 5: English Heritage vertical aerial photographs consulted for the remote sensing survey of the Stoke Mandeville and Aylesbury study area

English Heritage library number	Original sortie number	Original frame number	Date taken
21	RAF/106G/UK/717	4041	26 August 1945
21	RAF/106G/UK/717	4042	26 August 1945
21	RAF/106G/UK/717	4043	26 August 1945
21	RAF/106G/UK/717	4044	26 August 1945
21	RAF/106G/UK/717	4076	26 August 1945
21	RAF/106G/UK/717	4077	26 August 1945
21	RAF/106G/UK/717	4078	26 August 1945
21	RAF/106G/UK/717	4079	26 August 1945
21	RAF/106G/UK/717	4080	26 August 1945
562	RAF/CPE/UK/1897	3061	12 December 1946
562	RAF/CPE/UK/1897	3062	12 December 1946
562	RAF/CPE/UK/1897	4063	12 December 1946
562	RAF/CPE/UK/1897	4064	12 December 1946
562	RAF/CPE/UK/1897	4065	12 December 1946
601	RAF/CPE/UK/2008	3084	16 April 1947
601	RAF/CPE/UK/2008	3085	16 April 1947
601	RAF/CPE/UK/2008	3086	16 April 1947
601	RAF/CPE/UK/2008	3087	16 April 1947
601	RAF/CPE/UK/2008	3088	16 April 1947
601	RAF/CPE/UK/2008	4087	16 April 1947
601	RAF/CPE/UK/2008	4088	16 April 1947
601	RAF/CPE/UK/2008	4089	16 April 1947
601	RAF/CPE/UK/2008	4090	16 April 1947
601	RAF/CPE/UK/2008	4091	16 April 1947
680	RAF/CPE/UK/2159	3040	13 June 1947
680	RAF/CPE/UK/2159	3041	13 June 1947
680	RAF/CPE/UK/2159	3042	13 June 1947
680	RAF/CPE/UK/2159	4042	13 June 1947
680	RAF/CPE/UK/2159	4043	13 June 1947
760	RAF/CPE/UK/2436	3022	04 February 1948

760	RAF/CPE/UK/2436	3023	04 February 1948
760	RAF/CPE/UK/2436	3024	04 February 1948
760	RAF/CPE/UK/2436	3025	04 February 1948
760	RAF/CPE/UK/2436	3080	04 February 1948
760	RAF/CPE/UK/2436	3081	04 February 1948
760	RAF/CPE/UK/2436	3082	04 February 1948
760	RAF/CPE/UK/2436	3083	04 February 1948
760	RAF/CPE/UK/2436	3111	04 February 1948
760	RAF/CPE/UK/2436	3112	04 February 1948
760	RAF/CPE/UK/2436	4024	04 February 1948
760	RAF/CPE/UK/2436	4025	04 February 1948
760	RAF/CPE/UK/2436	4026	04 February 1948
760	RAF/CPE/UK/2436	4112	04 February 1948
793	RAF/CPE/UK/2540	5074	25 March 1948
793	RAF/CPE/UK/2540	5075	25 March 1948
795	RAF/CPE/UK/2483	3129	10 March 1948
795	RAF/CPE/UK/2483	3130	10 March 1948
795	RAF/CPE/UK/2483	3131	10 March 1948
795	RAF/CPE/UK/2483	3138	10 March 1948
795	RAF/CPE/UK/2483	3140	10 March 1948
795	RAF/CPE/UK/2483	3141	10 March 1948
795	RAF/CPE/UK/2483	3142	10 March 1948
795	RAF/CPE/UK/2483	3143	10 March 1948
795	RAF/CPE/UK/2483	3209	10 March 1948
795	RAF/CPE/UK/2483	3210	10 March 1948
1033	RAF/58/374	5001	01 March 1950
1033	RAF/58/374	5072	01 March 1950
1061	RAF/541/479	3133	07 April 1950
1061	RAF/541/479	3134	07 April 1950
1061	RAF/541/479	3135	07 April 1950
1061	RAF/541/479	3165	07 April 1950
1061	RAF/541/479	3166	07 April 1950
1061	RAF/541/479	3167	07 April 1950

1061	RAF/541/479	3168	07 April 1950
1061	RAF/541/479	3169	07 April 1950
1061	RAF/541/479	3170	07 April 1950
1061	RAF/541/479	3171	07 April 1950
1061	RAF/541/479	3196	07 April 1950
1061	RAF/541/479	3197	07 April 1950
1061	RAF/541/479	3351	07 April 1950
1061	RAF/541/479	3352	07 April 1950
1061	RAF/541/479	3353	07 April 1950
1061	RAF/541/479	4135	07 April 1950
1061	RAF/541/479	4136	07 April 1950
1061	RAF/541/479	4137	07 April 1950
1061	RAF/541/479	4138	07 April 1950
1061	RAF/541/479	4171	07 April 1950
1061	RAF/541/479	4172	07 April 1950
1061	RAF/541/479	4173	07 April 1950
1061	RAF/541/479	4336	07 April 1950
1061	RAF/541/479	4337	07 April 1950
1061	RAF/541/479	4354	07 April 1950
1061	RAF/541/479	4355	07 April 1950
1061	RAF/541/479	4356	07 April 1950
1511	RAF/540/1269	13	12 March 1954
1511	RAF/540/1269	14	12 March 1954
1511	RAF/540/1269	15	12 March 1954
1511	RAF/540/1269	16	12 March 1954
1555	RAF/82/995	75	26 August 1954
1555	RAF/82/995	76	26 August 1954
1555	RAF/82/995	77	26 August 1954
1555	RAF/82/995	77	26 August 1954
1555	RAF/82/995	78	26 August 1954
1555	RAF/82/995	79	26 August 1954
1563	RAF/540/1400	153	01 September 1954
2144	RAF/58/4655	11	30 August 1961

2144	RAF/58/4655	17	30 August 1961
2144	RAF/58/4655	18	30 August 1961
2144	RAF/58/4655	19	30 August 1961
2144	RAF/58/4655	20	30 August 1961
2144	RAF/58/4655	23	30 August 1961
2195	RAF/58/4627	408	16 August 1961
2195	RAF/58/4627	409	16 August 1961
2195	RAF/58/4627	410	16 August 1961
2195	RAF/58/4627	411	16 August 1961
2195	RAF/58/4627	412	16 August 1961
2661	RAF/541/340	3003	26 July 1949
2661	RAF/541/340	3004	26 July 1949
2661	RAF/541/340	3309	26 July 1949
2661	RAF/541/340	3310	26 July 1949
2661	RAF/541/340	3311	26 July 1949
2661	RAF/541/340	4312	26 July 1949
2661	RAF/541/340	4313	26 July 1949
2667	RAF/541/273	3038	21 June 1949
2667	RAF/541/273	3039	21 June 1949
2670	RAF/541/272	3213	21 June 1949
2670	RAF/541/272	3214	21 June 1949
2670	RAF/541/272	3215	21 June 1949
2670	RAF/541/272	3216	21 June 1949
2670	RAF/541/272	3217	21 June 1949
2670	RAF/541/272	3264	21 June 1949
2670	RAF/541/272	3265	21 June 1949
2670	RAF/541/272	3266	21 June 1949
2670	RAF/541/272	3267	21 June 1949
2670	RAF/541/272	4034	21 June 1949
2670	RAF/541/272	4035	21 June 1949
2670	RAF/541/272	4036	21 June 1949
3345	RAF/106G/UK/1413	3457	14 April 1946
3345	RAF/106G/UK/1413	3458	14 April 1946



3560	RAF/106G/UK/683	4046	23 August 1945
3560	RAF/106G/UK/683	4047	23 August 1945
3560	RAF/106G/UK/683	4048	23 August 1945
3560	RAF/106G/UK/683	4049	23 August 1945
3560	RAF/106G/UK/683	4050	23 August 1945
8996	MAL/71182	19	09 December 1971
9901	OS/76043	12	29 April 1976
9901	OS/76043	13	29 April 1976
9901	OS/76043	14	29 April 1976
9901	OS/76043	15	29 April 1976
9901	OS/76043	68	29 April 1976
9901	OS/76043	69	29 April 1976
10212	OS/71344	571	15 July 1971
10212	OS/71344	572	15 July 1971
10212	OS/71344	573	15 July 1971
10212	OS/71344	574	15 July 1971
10212	OS/71344	575	15 July 1971
10213	OS/71383	757	15 July 1971
10213	OS/71383	758	15 July 1971
10213	OS/71383	759	15 July 1971
10213	OS/71383	898	15 July 1971
10213	OS/71383	899	15 July 1971
10213	OS/71383	900	15 July 1971
10213	OS/71383	1067	15 July 1971
10213	OS/71383	1068	15 July 1971
10213	OS/71383	1069	15 July 1971
10214	OS/71483	1424	07 September 1971
10214	OS/71483	1425	07 September 1971
10214	OS/71483	1426	07 September 1971
11636	OS/67277	2	17 July 1967
11636	OS/67277	3	17 July 1967
11636	OS/67277	4	17 July 1967
11638	OS/69254	125	10 June 1969

11638	OS/69254	126	10 June 1969
11638	OS/69254	128	10 June 1969
11638	OS/69254	129	10 June 1969
11638	OS/69254	130	10 June 1969
12311	OS/78064	59	28 May 1978
12311	OS/78064	60	28 May 1978
12311	OS/78064	61	28 May 1978
12904	OS/86248	216	26 September 1986
12904	OS/86248	217	26 September 1986
12904	OS/86248	218	26 September 1986
12904	OS/86248	230	26 September 1986
12904	OS/86248	231	26 September 1986
12904	OS/86248	232	26 September 1986
12904	OS/86248	233	26 September 1986
14515	OS/93588	42	15 October 1993
14515	OS/93588	43	15 October 1993
14515	OS/93588	44	15 October 1993
14515	OS/93588	54	15 October 1993
14515	OS/93588	55	15 October 1993
14515	OS/93588	56	15 October 1993
14531	OS/93357	6	30 June 1993
14531	OS/93357	7	30 June 1993
14531	OS/93357	8	30 June 1993
14531	OS/93357	9	30 June 1993
14531	OS/93357	10	30 June 1993
14531	OS/93357	11	30 June 1993
14531	OS/93357	52	30 June 1993
14531	OS/93357	53	30 June 1993
14531	OS/93357	54	30 June 1993
14531	OS/93357	55	30 June 1993
14531	OS/93357	80	30 June 1993
14531	OS/93357	81	30 June 1993
14531	OS/93357	82	30 June 1993

14549	OS/94037	68	26 March 1994
14549	OS/94037	69	26 March 1994
14549	OS/94037	99	26 March 1994
14549	OS/94037	100	26 March 1994
14549	OS/94037	101	26 March 1994
14549	OS/94037	102	26 March 1994
14768	OS/94536	207	18 October 1994
14768	OS/94536	254	18 October 1994
14768	OS/94536	255	18 October 1994
14768	OS/94536	256	18 October 1994
14768	OS/94536	257	18 October 1994
14768	OS/94536	258	18 October 1994
14768	OS/94536	266	18 October 1994
14768	OS/94536	267	18 October 1994
15399	RAF/58/8419	63	14 November 1967
15399	RAF/58/8419	64	14 November 1967
15399	RAF/58/8419	89	14 November 1967
15399	RAF/58/8419	90	14 November 1967
40294	EA/AF/97C/682	8309	20 March 1997
40294	EA/AF/97C/682	8310	20 March 1997
40294	EA/AF/97C/682	8311	20 March 1997
40294	EA/AF/97C/682	8312	20 March 1997
40294	EA/AF/97C/682	8409	20 March 1997
40294	EA/AF/97C/682	8410	20 March 1997
40294	EA/AF/97C/682	8411	20 March 1997
40294	EA/AF/97C/682	8412	20 March 1997
40295	EA/AF/97C/683	8616	20 March 1997
40295	EA/AF/97C/683	8617	20 March 1997
40295	EA/AF/97C/683	8618	20 March 1997
40295	EA/AF/97C/683	8619	20 March 1997
40295	EA/AF/97C/683	8620	20 March 1997
40295	EA/AF/97C/683	8621	20 March 1997
40295	EA/AF/97C/683	8704	20 March 1997

40295	EA/AF/97C/683	8705	20 March 1997
40295	EA/AF/97C/683	8706	20 March 1997
40295	EA/AF/97C/683	8707	20 March 1997
40295	EA/AF/97C/683	8708	20 March 1997
40296	EA/AF/97C/684	8022	01 April 1997
40296	EA/AF/97C/684	8023	01 April 1997
40296	EA/AF/97C/684	8024	01 April 1997
40296	EA/AF/97C/684	8025	01 April 1997
40296	EA/AF/97C/684	8026	01 April 1997
40296	EA/AF/97C/684	8027	01 April 1997
40296	EA/AF/97C/684	8028	01 April 1997
40296	EA/AF/97C/684	8101	01 April 1997
40296	EA/AF/97C/684	8102	01 April 1997
40296	EA/AF/97C/684	8103	01 April 1997
40296	EA/AF/97C/684	8104	01 April 1997
40297	EA/AF/97C/702	1337	01 April 1997
40297	EA/AF/97C/702	1338	01 April 1997
40297	EA/AF/97C/702	1339	01 April 1997
40297	EA/AF/97C/702	1340	01 April 1997
40297	EA/AF/97C/702	1341	01 April 1997
40297	EA/AF/97C/702	1342	01 April 1997
40299	EA/AF/97C/704	603	01 April 1997
40299	EA/AF/97C/704	604	01 April 1997
40299	EA/AF/97C/704	605	01 April 1997
40299	EA/AF/97C/704	606	01 April 1997
40299	EA/AF/97C/704	607	01 April 1997
40299	EA/AF/97C/704	608	01 April 1997
40299	EA/AF/97C/704	793	01 April 1997
40299	EA/AF/97C/704	794	01 April 1997
40299	EA/AF/97C/704	795	01 April 1997
40299	EA/AF/97C/704	796	01 April 1997
40299	EA/AF/97C/704	797	01 April 1997
40299	EA/AF/97C/704	798	01 April 1997

40300	EA/AF/97C/705	1420	01 April 1997
40300	EA/AF/97C/705	1421	01 April 1997
40300	EA/AF/97C/705	1422	01 April 1997
40300	EA/AF/97C/705	1423	01 April 1997
40300	EA/AF/97C/705	1424	01 April 1997
40300	EA/AF/97C/705	1425	01 April 1997
40301	EA/AF/97C/706	882	01 April 1997
40301	EA/AF/97C/706	883	01 April 1997
40301	EA/AF/97C/706	884	01 April 1997
40301	EA/AF/97C/706	885	01 April 1997
40301	EA/AF/97C/706	886	01 April 1997
40301	EA/AF/97C/706	887	01 April 1997
40301	EA/AF/97C/706	1060	01 April 1997
40301	EA/AF/97C/706	1061	01 April 1997
40301	EA/AF/97C/706	1062	01 April 1997
40301	EA/AF/97C/706	1063	01 April 1997
40301	EA/AF/97C/706	1064	01 April 1997
40301	EA/AF/97C/706	1065	01 April 1997

Table 6: English Heritage oblique aerial photographs consulted for the remote sensing survey of the Stoke Mandeville and Aylesbury study area

English Heritage photo reference	Film number	Original frame number	Date taken
SP 7912 / 1	CAP 8338	/ 92	08 April 1956
SP 7912 / 2	NMR 18929	/ 06	22 September 2000
SP 7912 / 3	NMR 18929	/ 07	22 September 2000
SP 7912 / 4	NMR 18929	/ 08	22 September 2000
SP 7912 / 5	NMR 18929	/ 09	22 September 2000
SP 7912 / 6	NMR 18929	/ 10	22 September 2000
SP 7912 / 7	NMR 18929	/ 11	22 September 2000
SP 7912 / 8	NMR 18929	/ 12	22 September 2000
SP 7912 / 9	NMR 18939	/ 11	22 September 2000
SP 7912 / 10	NMR 18939	/ 15	22 September 2000
SP 7912 / 11	NMR 18939	/ 16	22 September 2000
SP 7912 / 12	NMR 18939	/ 17	22 September 2000

SP 7912 / 13	NMR 18939	/ 18	22 September 2000
SP 7912 / 14	NMR 18939	/ 19	22 September 2000
SP 7912 / 15	NMR 18877	/ 01	22 September 2000
SP 7912 / 17	NMR 18877	/ 04	22 September 2000
SP 7912 / 18	NMR 18877	/ 05	22 September 2000
SP 7912 / 19	NMR 18877	/ 06	22 September 2000
SP 7912 / 20	NMR 18877	/ 07	22 September 2000
SP 7912 / 21	NMR 18877	/ 08	22 September 2000
SP 7912 / 22	NMR 18877	/ 09	22 September 2000
SP 7912 / 23	NMR 18877	/ 10	22 September 2000
SP 8012 / 11	NMR 18939	/ 12	22 September 2000
SP 8012 / 12	NMR 18877	/ 02	22 September 2000
SP 8308 / 15	NMR 26691	/ 14	09 July 2010
SP 8308 / 16	NMR 26691	/ 15	09 July 2010
SP 8308 / 17	NMR 26691	/ 16	09 July 2010
SP 8308 / 18	NMR 26691	/ 17	09 July 2010
SP 8308 / 19	NMR 26691	/ 18	09 July 2010
SP 8308 / 20	NMR 26691	/ 19	09 July 2010
SP 8308 / 21	NMR 26691	/ 20	09 July 2010
SP 8308 / 22	NMR 26691	/ 21	09 July 2010
SP 8308 / 23	NMR 26691	/ 22	09 July 2010
SP 8309 / 1	NMR 2198	/ 064	06 February 1985
SP 8309 / 2	NMR 2198	/ 070	06 February 1985
SP 8309 / 3	NMR 2198	/ 065	06 February 1985
SP 8309 / 4	NMR 2198	/ 066	06 February 1985
SP 8309 / 5	NMR 2198	/ 067	06 February 1985
SP 8309 / 6	NMR 2198	/ 068	06 February 1985
SP 8309 / 7	NMR 2198	/ 069	06 February 1985
SP 8309 / 8	NMR 2198	/ 071	06 February 1985
SP 8309 / 9	NMR 2198	/ 072	06 February 1985
SP 8309 / 10	NMR 2198	/ 073	06 February 1985
SP 8309 / 11	NMR 2198	/ 074	06 February 1985
SP 8309 / 12	NMR 2198	/ 075	06 February 1985

SP 8309 / 13	NMR 2198	/ 076	06 February 1985
SP 8309 / 14	NMR 2198	/ 077	06 February 1985
SP 8309 / 15	NMR 2198	/ 078	06 February 1985
SP 8309 / 16	NMR 2198	/ 079	06 February 1985
SP 8309 / 17	NMR 2198	/ 080	06 February 1985
SP 8309 / 18	NMR 2198	/ 081	06 February 1985
SP 8309 / 19	NMR 2198	/ 082	06 February 1985
SP 8309 / 20	NMR 2198	/ 083	06 February 1985
SP 8408 / 1	NMR 26691	/ 23	09 July 2010
SP 8408 / 2	NMR 26691	/ 24	09 July 2010
SP 7714 / 16	NMR 26962	/ 11	01 June 2011
SP 7714 / 17	NMR 26962	/ 13	01 June 2011
SP 7714 / 18	NMR 26962	/ 14	01 June 2011
SP 7714 / 19	NMR 26962	/ 15	01 June 2011
SP 7714 / 20	NMR 26962	/ 16	01 June 2011
SP 7714 / 21	NMR 26962	/ 17	01 June 2011
SP 7714 / 22	NMR 26962	/ 18	01 June 2011
SP 7714 / 23	NMR 26962	/ 19	01 June 2011
SP 7714 / 24	NMR 26962	/ 20	01 June 2011
SP 7715 / 1	CAP 8109	/ 17	22 April 1953
SP 7715 / 2	CAP 8109	/ 18	22 April 1953
SP 7715 / 3	CAP 8109	/ 19	22 April 1953
SP 7715 / 4	CAP 8109	/ 20	22 April 1953
SP 7715 / 5	NMR 26962	/ 12	01 June 2011
SP 7716 / 1	OSV 11230	/ ORACLE70	Unknown
SP 7716 / 2	OSV 11230	/ ORACLE71	Unknown
SP 7716 / 3	CAP 8338	/ 95	08 April 1956
SP 7716 / 4	CAP 8338	/ 96	08 April 1956
SP 7716 / 5	CAP 8338	/ 97	08 April 1956
SP 7716 / 6	CAP 8338	/ 98	08 April 1956
SP 7716 / 7	CAP 8338	/ 99	08 April 1956
SP 7716 / 8	CAP 8338	/ 100	08 April 1956
SP 7716 / 9	CAP 7513	/ 10100	08 April 1956

SP 7716 / 10	CAP 7505	/ 2	08 April 1956
SP 7912 / 16	NMR 18877	/ 03	22 September 2000
SP 7913 / 1	CAP 8338	/ 93	08 April 1956
SP 7913 / 2	CAP 8338	/ 94	08 April 1956
SP 7913 / 3	NMR 18939	/ 13	22 September 2000
SP 7913 / 4	NMR 18939	/ 14	22 September 2000

Table 7: Cambridge University Collection of Aerial Photography aerial photographs consulted for the remote sensing survey of the Stoke Mandeville and Aylesbury study area

Cambridge University Collection of Aerial Photography catalogue number	Type	Date taken
ACV51	Oblique	24 April 1961
ACV52	Oblique	24 April 1961
ACV53	Oblique	24 April 1961
ACV54	Oblique	24 April 1961
ACV55	Oblique	24 April 1961
AEF6	Oblique	08 May 1962
AEF7	Oblique	08 May 1962
AEF8	Oblique	08 May 1962
AEF9	Oblique	08 May 1962
AEF10	Oblique	08 May 1962
AEF11	Oblique	08 May 1962
AMP21	Oblique	06 December 1965
AMP22	Oblique	06 December1965
AMP23	Oblique	06 December 1965
ANG56	Oblique	18 March 1966
ANG57	Oblique	18 March 1966
ANI90	Oblique	23 March 1966
ANI91	Oblique	23 March 1966
ANI92	Oblique	23 March 1966
ANI93	Oblique	23 March 1966
ANI94	Oblique	23 March 1966
ANI95	Oblique	23 March 1966
BWJ3	Oblique	23 January 1976

BWJ4	Oblique	23 January 1976
CPQ48	Oblique	15 October 1980
CPQ49	Oblique	15 October 1980
CPQ50	Oblique	15 October 1980
CPQ51	Oblique	15 October 1980
CPQ52	Oblique	15 October 1980
CPQ53	Oblique	15 October 1980
CPQ54	Oblique	15 October 1980
CPQ55	Oblique	15 October 1980
CPQ56	Oblique	15 October 1980
CPQ57	Oblique	15 October 1980
LM17	Oblique	22 April 1953
LM18	Oblique	22 April 1953
LM19	Oblique	22 April 1953
LM20	Oblique	22 April 1953
RC8HE202	Vertical	05 March 1985
RC8HE203	Vertical	05 March 1985
RC8HI272	Vertical	12 March 1985
RC8HI273	Vertical	12 March 1985
RC8HJ005	Vertical	12 March 1985
RC8HJ006	Vertical	12 March 1985
RC8HJ076	Vertical	12 March 1985
RC8HJ077	Vertical	12 March 1985
RC8HJ082	Vertical	12 March 1985
RC8HJ083	Vertical	12 March 1985
SG92	Oblique	08 April 1956
SG93	Oblique	08 April 1956
SG94	Oblique	08 April 1956
SG95	Oblique	08 April 1956
SG96	Oblique	08 April 1956
SG97	Oblique	08 April 1956
SG98	Oblique	08 April 1956
SG99	Oblique	08 April 1956

SG100	Oblique	08 April 1956
SG101	Oblique	08 April 1956
SG102	Oblique	08 April 1956
ZknSC7	Vertical	04 November 2006
ZknSC8	Vertical	04 November 2006
ZknSC9	Vertical	04 November 2006

2.10      Figures

CH-004-11.01	Remote sensing survey interpretation	1:5,000
CH-004-11.02	Remote sensing survey interpretation	1:5,000
CH-004-11.03	Remote sensing survey interpretation	1:5,000
CH-004-11.04	Remote sensing survey interpretation	1:5,000
CH-004-11.05	Remote sensing survey interpretation	1:5,000
CH-004-11.06	Remote sensing survey interpretation	1:5,000
CH-004-11.07	Remote sensing survey interpretation	1:5,000
CH-004-11.08	Remote sensing survey interpretation	1:5,000

# 3 Geophysical surveys

## 3.1 Site IBoAA(1): St Mary's, Stoke Mandeville

### Introduction

3.1.1 An archaeological geophysical survey was undertaken on the former site of St Mary's Church, Stoke Mandeville, Buckinghamshire (site code: IBoAA(1); Figure CH-004-11.08). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

### The site

3.1.2 The survey site is located at National Grid reference (NGR) SP 8370 0950. It lies on the southern side of Stoke Mandeville, between Stoke House and Mill House Farm (Figure CH-004-11.09). It comprises an elongated block of land, approximately 5.3ha in extent, divided into three fields. A small brook flows north-westwards through the middle of the site and another watercourse, probably a mill leat, flows along its north-eastern edge.

3.1.3 The survey area lies within the Vale of Aylesbury, approximately 2km north of the Chiltern scarp. It stands just below the 100m contour, and has a generally subdued topography. The underlying geology comprises Gault Clay. No drift deposits are mapped, although the location of the site is such that minor pockets of alluvium or head may perhaps be expected<sup>20</sup>.

### Summary archaeological/historic background

3.1.4 The survey area surrounds the former site of St Mary's Church, a 12th century building which became redundant in the late 19th century and was subsequently demolished<sup>21</sup>. Earthworks, cropmarks and chance finds indicate that the area around the church was occupied in the medieval period. Two sides of a rectangular earthwork remain to the south-east of the church and traces of fishponds and moats are present nearby. Features identified as a probable street grid are also visible on aerial photography.

3.1.5 Stoke House, to the immediate north of the survey site, is an early 18th century building which is believed to stand on the site of an earlier manor house<sup>22</sup>. The remains of a 19th century watermill are present within its grounds, and documentary evidence suggests that earlier mill buildings may once have occupied the same site<sup>23</sup>.

### Methodology

3.1.6 The survey was carried out in accordance with current English Heritage guidelines<sup>24</sup> and a written scheme of investigation<sup>25</sup>. A detailed magnetometer survey of the site was undertaken on 28 May 2013.

3.1.7 An independent network of 30m grid squares was established across the survey area (Figure CH-004-11.10). Each grid was laid out with a tape measure and optical square and was tied in to the OS National Grid by recording the baseline location with a Leica Systems 1200 differential global positioning system. Unfortunately, the telephone signal was very poor on site, and the differential global positioning system could not achieve the level of precision that would normally be expected. The error margin on most grid readings was of the order of +/- 1m. Taped measurements were taken as an alternative means of tie-in, but this was only possible in a few locations, where the field boundaries were suitably well-defined.

3.1.8 The survey data were collected with Bartington Grad 601-2 twin sensor array vertical component fluxgate gradiometers. These are standard instruments for archaeological survey, capable of resolving magnetic field strength to a precision of 0.1 nanoTesla<sup>26</sup>. The instruments were carried at a brisk but steady pace through each grid square, collecting data along 1m-spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3,600 measurements per square.

3.1.9 The survey data was viewed and processed using Geoplot 3.00v software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed as necessary. Greyscale bitmaps of the data (scale +/- 4 nanoTesla, black/white) were exported and were georectified using the RasTools function in MapInfo v8. XY trace plots of the data were not produced, as they were not considered to be appropriate in this instance.

### Limitations

3.1.10 Magnetometer survey is a useful and widely-deployed form of archaeological prospection, but it suffers from several well-recognised limitations<sup>27</sup>:

- it is a shallow-seeking technique, generally unable to detect archaeology beneath more than 1m of overburden;
- small and ephemeral remains (e.g. postholes, beam slots, cremation burials, etc.) are rarely detected, especially at the standard survey resolution of 1m x 0.25m;
- stone building remains can only be detected under particularly favourable conditions;
- the technique can be ineffective over certain geological substrates which do not support the formation of well-developed contrasts in soil magnetism. It may also be hindered by highly magnetic geologies (e.g. ironstone, igneous dykes); and
- certain modern structures (e.g. fences, steel-framed buildings, water pipes) produce

<sup>20</sup> British Geological Survey; GeoIndex; <http://mapapps2.bgs.ac.uk/geoindex/home.html>; Accessed: 31 July 2013.

<sup>21</sup> Buckinghamshire Historic Environment Record No. 0094000000.

<sup>22</sup> Buckinghamshire Historic Environment Record No. 0292302000.

<sup>23</sup> Buckinghamshire Historic Environment Record No. 0284600000.

<sup>24</sup> English Heritage, (2008), *Geophysical Survey in Archaeological Field Evaluation*.

<sup>25</sup> Cotswold Archaeology, (2013), *HS2 Buckinghamshire: Written Scheme of Investigation for Geophysical and Metal Detecting Surveys*.

<sup>26</sup> Bartington, G. and Chapman, C., (2003), A high-stability fluxgate magnetic gradiometer for shallow geophysical survey applications, *Archaeological Prospection*, Vol. 11, Pgs. 19-34.

<sup>27</sup> English Heritage, (2008), Pgs. 13-18.

intense magnetic halos which can obscure the much weaker anomalies arising from archaeological remains.

### Assumptions

- 3.1.11 There are no methodological assumptions applicable to the conduct of this survey. Readers should be aware, however, that the interpretation of archaeological geophysical data is a qualitative process, based on a combination of theoretical principles and past experience, and that absolute confidence is not always achievable.

### Results: description

- 3.1.12 See Figures CH-004-11.11 and CH-004-11.12. The data from Field 1 contains a number of magnetic halos and a scatter of small dipolar anomalies. A few slightly larger dipoles are clustered at the northern end of the field.
- 3.1.13 An intensely magnetic linear anomaly of alternating polarity crosses Field 2 from north-west to south-east, and a very dense cluster of intense magnetic dipoles occurs in the north-eastern corner of the same field. The data from the rest of the field is largely bland, apart from a few small dipolar anomalies and magnetic halos.
- 3.1.14 A broad, slightly diffuse positive linear anomaly crosses the southern end of Field 3 from north-east to south-west, and there is a zone of generally amorphous positive anomalies to the north. Various magnetic halos and small dipolar anomalies are also present.

### Results: interpretation

- 3.1.15 See Figure CH-004-11.12. The results from Field 1 are minimally informative. The magnetic halos around the edges of the field are due to adjacent fences, and most of the dipolar anomalies represent minor pieces of ferrous debris within the topsoil. Other halos relate to the wire fences which sub-divided this field into small paddocks. Some of the larger dipolar anomalies at the northern end of the field are concentrated within a slight hollow and probably represent an accumulation of scrap within the backfill of a former pond.
- 3.1.16 Another backfilled pond is represented by the concentration of dipolar anomalies at the northern end of Field 2. Early editions of the OS mapping depict this pond on the side of a leat associated with the 19th century watermill.
- 3.1.17 The intensely magnetic linear anomaly which crosses Field 2 represents a modern pipeline. The positive linear anomaly in Field 3 probably represents a ditch. The anomalies further to the north in Field 3 are probably of geological origin.

### Conclusions

- 3.1.18 The survey identified three possible archaeological features: two backfilled ponds and a possible ditch. This is far less than might have been expected, considering the known history

of the survey area. It is recognised, however, that geophysical surveys do not always work well on medieval settlement sites<sup>28</sup> and that the detection of house platforms and other building remains by magnetometer can be especially problematic<sup>29</sup>. The results of this survey may not, therefore, provide a comprehensive reflection of any archaeological remains present at the site.

## 3.2 Site IBoAA(2): St Mary's (SMA004)

### Introduction

- 3.2.1 An archaeological geophysical survey was undertaken within a predefined area adjacent to the former site of St Mary's Church, Stoke Mandeville, Buckinghamshire (NGR: SP 8423 0971; Figure CH-004-11.13, SMA004). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

#### *The site*

- 3.2.2 The survey site is in the parish of Stoke Mandeville and Aylesbury Vale District. It lies to the east of the A4010 Risborough Road, approximately 5km south-east from the centre of Aylesbury (Figure CH-004-11.13). At the time of the survey, the site comprised three flat fields enclosing a total of approximately 19.8ha (Areas 1–3, Figure CH-004-11.14). Areas 1 and 2 were under a short cereal crop; Area 3 was overgrown, particularly towards the edges of the field.
- 3.2.3 The site bedrock is recorded as mudstones, siltstones and sandstones of the Gault Formation and Upper Greensand Formation. No superficial deposits have been recorded<sup>30</sup>. The soils in the area are classified as moderately permeable, fine loamy calcareous soils over chalky gravel of the Grove (512d) association<sup>31</sup>.

#### *Summary archaeological/historic background*

- 3.2.4 See Summary archaeological/historic background for Site IBoAA(1).

### Methodology

- 3.2.5 All survey work was carried out in accordance with current English Heritage guidelines<sup>32</sup> and a written scheme of investigation<sup>33</sup>.
- 3.2.6 All survey grid positioning was carried out using Trimble R8 Real Time Kinematic (RTK) VRSNow equipment. The geophysical survey area was georeferenced relative to the OS

<sup>28</sup> Gaffney C. and Gater J., (2003), *Revealing the buried past: Geophysics for archaeologists*, Tempus Publishing, Stroud. Pg 165.

<sup>29</sup> English Heritage, (2008), Pg 14.

<sup>30</sup> British Geological Survey; Geology of Britain Veiwser; <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>. Accessed: 31 July 2013.

<sup>31</sup> Soil Survey of England and Wales, (1983), *Soils of England and Wales, Sheet 3: Midland and Western England*, Soil Survey of England and Wales, Harpenden.

<sup>32</sup> English Heritage, (2008).

<sup>33</sup> Cotswold Archaeology, (2013).



National Grid by tying in to local detail. These tie-ins are presented in Figure CH-004-11.22. Please refer to this diagram when re-establishing the grid.

- 3.2.7 The magnetometer survey was carried out with Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing was performed as appropriate using an in-house software package (GeoSuB), employing the following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).
- 3.2.8 Data are presented as greyscale and XY trace plots (Figures CH-004-11.15, CH-004-11.17, CH-004-11.18, CH-004-11.19, CH-004-11.20, CH-004-11.21). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

### Limitations

- 3.2.9 Magnetic survey is an exceedingly effective technique for site evaluation. It provides fast data acquisition and responds, to some degree, to the majority of archaeological site-types. The technique relies upon anthropogenic enhancement of naturally-occurring iron-bearing compounds in the soil. Detection rates can be poor where archaeological sites have only seen temporary and/or sporadic occupation, or where there is insufficient activity to drive the enhancement. This is often true of lithic-era sites.
- 3.2.10 Success may also be limited over soils that are deficient in iron compounds, providing little material to be subject to enhancement. Conversely, the strength of response from soils and geological units which are naturally magnetic, for example igneous formations and soils derived thereof, may mask any subtler archaeological enhancement within.
- 3.2.11 The presence of ferrous structures either above or below ground (buildings, pylons, fences, pipes, etc.) will produce very strong magnetic fields which will extend far beyond their physical footprints. The strength of these magnetic 'shadows' is such that they can mask practically any archaeological anomalies. Similarly, later features and demolition spreads or imported consolidation material can produce areas of magnetic disturbance that can mask underlying features.
- 3.2.12 As a general rule the Bartington Grad601 instruments allow for a depth of investigation of approximately 1m, depending on the strength of the field produced by the buried feature. Below this depth, only particularly enhanced material will be detected with any degree of confidence.
- 3.2.13 The survey conditions for Areas 1 and 2 were good. The land was flat and under a short cereal crop which caused no hindrance to the survey.
- 3.2.14 Area 3 was under a failed crop and had been left untended. It was overgrown, with the vegetation generally reaching to between knee- and thigh-height. In some areas, the vegetation was waist-high; these areas were unsurveyable. The height and thickness of the vegetation in Area 3 introduced some stepping errors into the data, but these were corrected during the data processing. The overgrowth also meant that it was necessary to hold the instruments at a greater height in Area 3 than in the other areas, resulting in a reduced magnetic response.

### Assumptions

- 3.2.15 All of the fields within the site contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

### Results: description

- 3.2.16 See Figure CH-004-11.15. A number of linear positive magnetic anomalies are in evidence in Areas 2 and 3, although those in Area 3 are significantly weaker than those in Area 2. Some of the Area 2 anomalies form a square measuring approximately 50m<sup>2</sup>. Within this square are further anomalies of a positive and di-polar magnetic nature.
- 3.2.17 A very strong linear response was detected in the southern part of Area 3.

### Results: interpretation

#### *Archaeology/possible archaeology*

- 3.2.18 See Figure CH-004-11.16. A square enclosure [1] measuring approximately 50m<sup>2</sup> has been detected in Area 2. The northern edge of this enclosure appears to have a second, possibly segmented ditch on its inside flank.
- 3.2.19 The entire interior of enclosure [1] has been identified as a zone of archaeological responses as it contains many small discrete anomalies that are likely to be of archaeological origin. In particular there are three anomalies [2] which have been classified as burnt/fired. These three anomalies are very strong magnetically and have a distinctive 'double-peak' shape<sup>34</sup> which can be viewed in the XY Trace plot. This double peak, combined with the strength of the anomalies, suggests the presence of a kiln or oven.
- 3.2.20 Linear anomalies [3], towards the south-eastern boundary of Area 2, are of probable archaeological origin. These anomalies appear to form a series of divisions abutting a main spine ditch which runs north-east/south-west. Trend [5], in the north-western part of Area 3, may form a southern edge to these divisions. Some doubt is introduced due to the significantly-reduced magnetic response of ditch [5], although this reduced signature could have been caused by the necessity for the instruments to be carried at a greater height in Area 3 (due to the taller vegetation in this part of the site).
- 3.2.21 Anomalies [6] in Area 2 may be severely truncated ditches, perhaps associated with responses [3].
- 3.2.22 Anomaly [4] ran through the centre of Area 2 on a north-west/south-east alignment. This anomaly is of possible archaeological origin, although its parallel alignment to the current field boundaries may suggest a more modern origin. The available historic mapping shows no

<sup>34</sup> Gaffney and Gater, (2003), Pg. 157.



boundaries in this location, but this cannot preclude the possibility of a boundary being removed prior to the survey for the first edition OS map<sup>35</sup>.

#### *Agriculture and drainage*

- 3.2.23 The central part of Area 2 and the north-eastern part of Area 3 contain rows of parallel curving linear anomalies which have been classified as ridge and furrow. The most prominent of these anomalies are in Area 2 and coincide with enclosure [1]. This prominence is probably a result of the plough dragging magnetically-enhanced material from the enclosure ditches into the furrows.
- 3.2.24 Further very prominent parallel linear responses detected at the eastern edge of Area 2 and in the southern part of Area 3 are likely to represent field drainage systems.

#### *Modern*

- 3.2.25 A service pipe has been detected at the southern extreme of Area 3.

#### *Uncertain origin*

- 3.2.26 A linear positive magnetic anomaly [7] was recorded to north of centre in Area 3. This anomaly could be related to anomalies [4, 5 and 3], although anomaly [7] is similar in form to a field drain. The line of anomaly [7] is also respected by the field drains which lie to the immediate south, perhaps indicating that [7] is a headland.
- 3.2.27 Anomaly [8] lay in the north-central part of Area 3. Given that the adjacent ridge and furrow anomalies appear to respect the line of anomaly [8], the latter may be a headland. Alternatively, anomaly [8] is on a similar alignment to the field drains which lie to its immediate south-east, and may therefore be a drainage feature.
- 3.2.28 Further discrete anomalies and two zones of increased response are of uncertain origin. Although these anomalies have a potentially archaeological appearance, they are found in isolation and therefore a natural or modern origin cannot be ruled out.

### Conclusions

- 3.2.29 An enclosure measuring approximately 50m<sup>2</sup> has been detected in Area 2. The interior of this enclosure contains responses akin to ovens or kilns, as well as pit-like anomalies.
- 3.2.30 Linear anomalies apparently forming a series of land divisions were recorded within the southern part of Area 2/northern part of Area 3. Further anomalies in Area 2 may represent severely truncated ditches, perhaps associated with the possible land divisions.
- 3.2.31 An anomaly representative of a probable former field boundary ran through the centre of Area 2.

- 3.2.32 Anomalies related to agricultural and drainage regimes were recorded and a modern service pipe was identified at the southern end of the survey site.

## 3.3 Site IBoAB: Moat Farm (SMA022)

### Introduction

- 3.3.1 A geophysical survey was conducted over a predefined area at Moat Farm (NGR: SP 8250 1030; Figure CH-004-11.23, SMA022). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

#### *The site*

- 3.3.2 The survey site lies in the parish of Stoke Mandeville and Aylesbury Vale District. It is situated to the north of Marsh Lane, approximately 4km south of the centre of Aylesbury and some 1km west of Stoke Mandeville (Figure CH-004-11.23). At the time of the survey, the site comprised a single flat field under short pasture, enclosing approximately 4.2ha (Area 1, Figure CH-004-11.24).
- 3.3.3 The site's bedrock is recorded as mudstones, siltstones and sandstones of the Gault Formation and Upper Greensand Formation (undifferentiated). No superficial deposits have been recorded<sup>36</sup>. The soils in the area are classified as moderately-permeable, fine loamy calcareous soils over chalky gravel of the Grove (512d) association<sup>37</sup>.

#### *Summary archaeological/historic background*

- 3.3.4 The following section is summarised from the records of the Buckinghamshire HER.
- 3.3.5 The site lies on a north-facing slope in a shallow valley which passes known medieval settlements. The site is within area of generally high potential for archaeological remains of prehistoric date onwards. Previous fieldwalking surveys in the immediate vicinity of the site have retrieved artefacts from multi-period activity.

### Methodology

- 3.3.6 All survey work was carried out in accordance with current English Heritage guidelines<sup>38</sup> and a written scheme of investigation<sup>39</sup>.
- 3.3.7 All survey grid positioning was carried out using Trimble R8 RTK VRSNow equipment. The geophysical survey area was georeferenced relative to the OS National Grid by tying in to local detail. These tie-ins are presented in Figure CH-004-11.29. Please refer to this diagram when re-establishing the grid.

<sup>35</sup> Ordnance Survey; <http://www.old-maps.co.uk>; Accessed: 9 August 2013.

<sup>36</sup> British Geological Survey; Geology of Britain Viewer.

<sup>37</sup> SSEW, (1983).

<sup>38</sup> English Heritage, (2008).

<sup>39</sup> Cotswold Archaeology, (2013).

- 3.3.8
- The magnetometer survey was carried out with Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing was performed as appropriate using an in-house software package (GeoSuB), employing the following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).
- 3.3.9
- Data are presented as greyscale and XY trace plots (Figures CH-004-11.25, CH-004-11.27, CH-004-11.28, CH-004-11.29). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

Limitations

- 3.3.10
- See Limitations section for site IBoAA(2).
- 3.3.11
- The general survey conditions within the site were good. The land was flat and under short pasture, which caused no hindrance to the survey. At the northern end of the site an electricity pole and transformer presented little physical obstruction to the collection of data but caused a significant ferrous response. Buildings adjacent to the survey site have also caused large areas of the survey to be obscured by ferrous shadowing.

Assumptions

- 3.3.12
- All of the fields within the site contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

Results: description

- 3.3.13
- See Figure CH-004-11.25. The northern edge of the site is dominated by large, strongly magnetic responses. Small scale di-polar responses can also be seen throughout the site and along the other three boundaries.
- 3.3.14
- Roughly parallel linear positive magnetic responses can be seen crossing the survey area on a north-east/south-west orientation.

Results: interpretation

Agriculture: ridge and furrow

- 3.3.15
- See Figure CH-004-11.26. Ridge and furrow cultivation can be seen within the results as slightly curving linear positive magnetic anomalies aligned north-east/south-west.

Modern

- 3.3.16
- Agricultural buildings lining the northern boundary of the survey site have resulted in a large ferrous 'shadow' dominating the survey results. As a consequence, any weaker magnetic

anomalies that may be within this area will have been masked. A much narrower band of ferrous responses has been recorded around the other site boundaries; this was almost certainly caused by the wire fences within the current field boundary hedgerows.

- 3.3.17
- The electricity pole and transformer within the northern part of the survey site have caused a large magnetic 'halo'.

Conclusions

- 3.3.18
- Evidence of ridge and furrow ploughing regimes has been detected across the survey site.
- 3.3.19
- Modern buildings, an electricity pole and boundary fences have all caused large ferrous-type responses, which may have masked any weaker magnetic anomalies within these areas of the site.

3.4 Site IBoAC: South of Walton Court, Hartwell (SMA034)

Introduction

- 3.4.1
- A geophysical survey was conducted over a predefined site south of Walton Court, Hartwell, Buckinghamshire (NGR: SP 8080 1170; Figure CH-004-11.30, SMA034). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

The site

- 3.4.2
- The survey site lies just outside the south-western fringe of Aylesbury. It is within the parish of Stone with Bishopstone and Hartwell, and Aylesbury District (Figure CH-004-11.30). At the time of the survey, the site comprised three flat fields under short pasture, enclosing a total of approximately 11.1ha (Areas 1–3, Figure CH-004-11.31).
- 3.4.3
- The site bedrock is recorded as limestones and calcareous sandstones of the Portland Stone and Portland Sand Formations. No superficial deposits have been recorded<sup>40</sup>. The soils are classified as shallow, locally brashy, well-drained calcareous fine loamy soils over limestone of the Aberford (511a) association.<sup>41</sup>

Summary archaeological/historic background

- 3.4.4
- The following section is summarised from the records of the Buckinghamshire HER.
- 3.4.5
- Fieldwalking surveys in the vicinity of the site have recovered artefacts dating to the late prehistoric, Roman and medieval eras.

<sup>40</sup> British Geological Survey; Geology of Britain Viewer.  
<sup>41</sup> SSEW, (1983).

- 3.4.6 A possible Late Iron Age/Roman settlement was recorded during the construction of the Walton Court estate which lies to the immediate east of the site.
- 3.4.7 A bridge at the border of Aylesbury and Hartwell is mentioned in a 16th century charter. This may have stood at the southern periphery of Walton Court.

Methodology

- 3.4.8 All survey work was carried out in accordance with current English Heritage guidelines<sup>42</sup> and a written scheme of investigation<sup>43</sup>.
- 3.4.9 All survey grid positioning was carried out using Trimble R8 RTK VRSNow equipment. The geophysical survey area was georeferenced relative to the OS National Grid by tying in to local detail. These tie-ins are presented in Figure CH-004-11.37. Please refer to this diagram when re-establishing the grid.
- 3.4.10 The magnetometer survey data was collected by Stratascan personnel, using Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing was performed as appropriate using an in-house software package (GeoSuB), employing the following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).
- 3.4.11 Data are presented as greyscale and XY trace plots (Figures CH-004-11.32, CH-004-11.34, CH-004-11.35, CH-004-11.36). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

Limitations

- 3.4.12 See Limitations section for site (IBoAA(2)).
- 3.4.13 At the time of the survey the site comprised three flat fields under long grass. These conditions caused little hindrance to the survey. Any stepping errors caused by the long grass have been corrected during processing.

Assumptions

- 3.4.14 All of the fields within the site contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

Results: description

- 3.4.15 See Figure CH-004-11.32. A group of linear positive magnetic anomalies has been detected in Area 2. These anomalies have a stronger magnetic signature towards the south-eastern

corner of the area. Further weak linear positive magnetic anomalies have been detected throughout the data set.

- 3.4.16 A number of strong di-polar positive and negative anomalies have been detected across all three survey areas. Weak linear di-polar anomalies on a north/south alignment are also present within Areas 2 and 3.

Results: interpretation

Archaeology

- 3.4.17 See Figure CH-004-11.33. A group of positive magnetic anomalies detected within the south-eastern part of Area 2 have been classified as archaeology. These anomalies extend beyond the eastern limit of the survey site and comprise a series of linear ditches and possible enclosures, perhaps containing subdivisions. Anomaly [1] seems to mark the western and northern boundaries to the zone of archaeological anomalies.

Uncertain and natural

- 3.4.18 There are a number of isolated linear positive magnetic anomalies which have been categorised as of uncertain or natural origin. The weaker and more sinuous of these anomalies are likely to represent natural features.

Agricultural and drainage systems

- 3.4.19 Ridge and furrow cultivation can be seen within Area 3 as parallel linear positive magnetic anomalies.
- 3.4.20 Linear di-polar anomalies are in evidence throughout the survey site and have been categorised as field drains.

Modern

- 3.4.21 Small ferrous anomalies of probable modern origin have been detected across the survey area.

Conclusions

- 3.4.22 A zone of ditch-like anomalies has been identified in the south-western part of Area 2.
- 3.4.23 Further linear anomalies identified within the site might have an archaeological origin but their isolated nature and poor magnetic responses preclude a definitive interpretation.
- 3.4.24 Anomalies pertaining to agricultural practices and drainage systems have also been detected.

<sup>42</sup> English Heritage ,(2008).  
<sup>43</sup> Cotswold Archaeology, (2013).

3-5 Site KBoAA: East of Oxford Road, Hartwell

Introduction

3-5.1 A geophysical survey was conducted over a predefined site to the east of Oxford Road, Hartwell, Buckinghamshire (NGR: SP 8000 1220; Figure CH-004-11.38). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

The site

3-5.2 The survey site lies approximately 2.5km south-west of the centre of Aylesbury on the northern edge of the village of Hartwell. It is located on the south-western side of the A418 Oxford Road (Figure CH-004-11.38). The site lies in the parish of Stone with Bishopstone and Hartwell, in Aylesbury Vale district. At the time of the survey the site comprised four flat fields under short pasture enclosing a total of approximately 21.9ha (Areas 1–4, Figure CH-004-11.39).

3-5.3 The site is situated on bedrock of Portland Stone Formation (limestone), Portland Sand Formation (limestone and calcareous sandstone) and Kimmeridge Clay Formation (mudstone). No superficial deposits have been recorded<sup>44</sup>. The soils in the area are classified as shallow, locally brashy, well-drained calcareous fine loamy soils over limestone of the Aberford (511a) association<sup>45</sup>.

Summary archaeological/historic background

3-5.4 The following section is summarised from the records of the Buckinghamshire HER.

3-5.5 The site is within the former boundary of Locke’s Pit, a 19th century brickfield. Artefacts of Late Iron Age and Roman date were discovered within this brickfield, as well as Roman human cremation burials. It is likely that a Late Iron Age/Roman settlement was present at the site.

3-5.6 A bridge at the border of Aylesbury and Hartwell is mentioned in a 16th century charter. This bridge may have stood near the south-eastern corner of the site.

Methodology

3-5.7 All survey work was carried out in accordance with current English Heritage guidelines<sup>46</sup> and a written scheme of investigation<sup>47</sup>.

3-5.8 All survey grid positioning was carried out using Trimble R8 RTK VRSNow equipment. The geophysical survey area was georeferenced relative to the OS National Grid by tying in to local detail. These tie-ins are presented in Figure CH-004-11.46. Please refer to this diagram when re-establishing the grid.

3-5.9 The magnetometer survey data was collected using Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing was performed as appropriate using an in-house software package (GeoSuB), employing the following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).

3-5.10 Data are presented as greyscale and XY trace plots (Figures CH-004-11.40, CH-004-11.42, CH-004-11.43, CH-004-11.44, CH-004-11.45). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

Limitations

3-5.11 See Limitations section for site IBoAA(2).

3-5.12 The survey conditions at the site were generally good. The land was flat and under short pasture which caused no hindrance to the survey. Vegetation along the northern edge of Area 1 precluded survey, as did trees along a former boundary to the south of Glebe House. Two areas had to be precluded in Area 3 owing to a large zone of badger setts and a patch of tall nettles.

Assumptions

3-5.13 All of the fields within the site contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

Results: description

3-5.14 See Figure CH-004-11.40. Narrow linear bands of magnetic enhancement are just about discernible above the background levels of response. These bands run south-west/north-east in Area 1 and north-west/south-east in Area 2.

3-5.15 A set of weak positive rectilinear anomalies lies in the northern part of Area 4. Further weak linear responses of a ferrous nature were recorded in all areas.

3-5.16 Mottled areas of amorphous positive and negative anomalies were recorded in the eastern part of Area 2 and spreading into Areas 3 and 4. Elongated bands of similar response were detected in the western part of Area 1. All of these anomalies have curving trends of lesser response associated with them.

3-5.17 Spreads of increased response, much of which is of a ferrous nature, extend across the north-western corner of Area 1. More ferrous disturbances were recorded on the western edge and south-western corner of Area 1; the south-western corner of Area 2; the western edge of Area 4 and down the eastern side of a strong ferrous linear anomaly running south from Glebe Farm. Two further strong linear anomalies with alternating positive/negative responses were detected in the northern part of Area 3 and the southern part of Area 4.

<sup>44</sup> British Geological Survey; Geology of Britain Viewer.  
<sup>45</sup> SSEW, (1983).  
<sup>46</sup> English Heritage, (2008).  
<sup>47</sup> Cotswold Archaeology, (2013).



Results: interpretation

- 3.5.18 See CH-004-11.41. The geophysical survey recorded no anomalies of clear archaeological origin.
- 3.5.19 The weakly-enhanced linear anomalies in the northern part of Area 4 have a rectilinear distribution. These anomalies are similar in character to archaeological cut features. They may, however, represent a drainage system as the adjacent broad spread of amorphous anomalies in Areas 2, 3 and 4 is indicative of wet ground. It should be noted, however, that the other potential drains at the site have a slight ferrous component missing from the Area 4 linear anomalies.
- 3.5.20 The weakly-enhanced parallel linear responses in Areas 1 and 2 are indicative of former ridge and furrow cultivation.
- 3.5.21 The spread of increased response in the north-western part of Area 1 is delimited by former field boundaries depicted on historic OS mapping<sup>48</sup>. This land parcel was shown as an orchard or wood on the 1921 mapping and the clearance of trees to convert the fields to pasture could be responsible for the magnetic noise.
- 3.5.22 Magnetic disturbances halfway down the western boundary of Area 1 and on the western boundary of Area 4 are coincident with buildings depicted on historic OS mapping. These buildings had been demolished by the latter half of the 20th century<sup>49</sup>.
- 3.5.23 The strong linear anomaly running south from Glebe House follows the line of a former boundary (the removal of which is assumed to be the cause of the adjacent magnetic disturbance) and has the characteristics of a small metal pipe. The strong and alternating positive/negative linear responses through Areas 3 and 4 are also characteristic of metal pipes, with those in Area 3 running to the former building plot at the western edge of Area 4.
- 3.5.24 Natural responses are likely to be the result of localised topographic change and natural ground water movement.
- 3.5.25 A number of other trends identified across the site are not distinct enough for their origins to be determined. Some of these are likely to be either agricultural (isolated plough furrows) or the result of natural variation.

Conclusions

- 3.5.26 The geophysical survey detected few anomalies of definite archaeological origin. Many of these anomalies which were recorded relate to features depicted on historic OS mapping. These include disturbance relating to building demolition, the clearance of orchards/woodland and the removal of field boundaries.
- 3.5.27 There are a small number of rectilinear trends in the northern part of Area 4. These are similar in character to archaeological cut features but it is possible that they represent part of a drainage system.

<sup>48</sup> Ordnance Survey, (2013).  
<sup>49</sup> Ordnance Survey, (2013).

- 3.5.28 Evidence of ridge and furrow cultivation was also recorded.

3.6 KBoAC: South of Putlowes (SMA074)

Introduction

- 3.6.1 A geophysical survey was conducted over a predefined area south of Putlowes, Buckinghamshire (NGR: SP 7810 1480; Figure CH-004-11.47, SMA074). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

The site

- 3.6.2 The survey site lies approximately 4km west of the centre of Aylesbury. It is within the parish of Fleet Marston and Aylesbury Vale District (CH-004-11.47). At the time of the survey, the site comprised three flat fields under long grass enclosing a total of approximately 9.8ha (Areas 1–3, Figure CH-004-11.48).
- 3.6.3 The site bedrock is recorded as mudstone of the Kimmeridge Clay Formation. No superficial deposits have been recorded<sup>50</sup>. The soils in the area are classified as slowly-permeable, seasonally-waterlogged fine loamy soils of the Sportsmans (713b) association, and stoneless clayey soils of the Fladbury 1 (813b) association.<sup>51</sup>

Summary archaeological/historic background

- 3.6.4 The following section is summarised from the records of the Buckinghamshire HER.
- 3.6.5 The site lies on the south-eastern fringes of Fleet Marston Romano-British small town. Roman artefacts were recovered during a metal-detecting survey at Putlowes which lies to the immediate north-east of the site.
- 3.6.6 There is documentary evidence to suggest that Putlowes was a medieval village.

Methodology

- 3.6.7 All survey work was carried out in accordance with current English Heritage guidelines<sup>52</sup> and a written scheme of investigation<sup>53</sup>.
- 3.6.8 All survey grid positioning was carried out using Trimble R8 RTK VRSNow equipment. The geophysical survey area was georeferenced relative to the OS National Grid by tying in to local detail. These tie-ins are presented in Figure CH-004-11.54. Please refer to this diagram when re-establishing the grid.

<sup>50</sup> British Geological Survey; Geology of Britain Viewer.  
<sup>51</sup> SSEW, (1983).  
<sup>52</sup> English Heritage, (2008).  
<sup>53</sup> Cotswold Archaeology, (2013).

- 3.6.9

The magnetometer survey data was carried out with a Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing has been performed as appropriate using an in-house software package (GeoSuB), employing the following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).
- 3.6.10

Data are presented as greyscale and XY trace plots (Figures CH-004-11.49, CH-004-11.51, CH-004-11.52, CH-004-11.53, CH-004-11.54). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

Limitations

- 3.6.11

See Limitation section for Site IBoAA(2).
- 3.6.12

The site survey conditions were generally acceptable. The topography was flat and although the long grass led to some 'stepping' errors these were corrected during data processing with limited loss of data quality.

Assumptions

- 3.6.13

All of the fields contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

Results: description

- 3.6.14

See Figure CH-004-11.49. Area 1 contains a linear di-polar response aligned north-north-east/south-south-west. There are scatters of non-linear di-poles in all areas. A few very weak linear trends are visible in Areas 1 and 2.
- 3.6.15

The dataset from Area 3 is dominated by sinuous but relatively weak and poorly-defined anomalies in its southern half.

Results: interpretation

Archaeology

- 3.6.16

See Figure CH-004-11.50. No anomalies of clear archaeological interest were detected.

Natural and uncertain origin

- 3.6.17

The curvilinear and poorly-defined anomalies in Area 3 are almost certainly of natural origin. They probably represent alluvial deposits and palaeochannels associated with the adjacent River Thame and its tributary.

- 3.6.18

Weak parallel linear anomalies in the western part of Area 1 are likely to represent ridge and furrow cultivation, but their relative weakness and isolation has led to their categorisation as being of uncertain origin.
- 3.6.19

A linear response in the eastern part of Area 1 may be a former ditch or boundary pre-dating OS mapping, but its weak and intermittent nature means that it is of uncertain origin.

Drainage

- 3.6.20

Parallel di-polar linear anomalies at the western boundary of Area 2 are probably caused by field drains.

Modern

- 3.6.21

The north-north-east/south-south-west-aligned di-polar linear anomaly in Area 1 is characteristic of a ferrous pipe. This anomaly aligns with a track running to the north of Area 1, suggesting that the pipe follows the line of former continuation of this track.
- 3.6.22

Zones of magnetic disturbance at the north-western edge of Area 1 and in the northern part of Area 2 correspond to farm buildings shown on historic mapping<sup>54</sup> and probably represent demolition rubble and disturbed ground.
- 3.6.23

The origin of the magnetic disturbance in the south-western part of Area 2 is uncertain, although a small copse depicted on the 1880 edition of the OS map may account for part of the anomaly.

Conclusions

- 3.6.24

The survey detected no anomalies likely to be of archaeological origin.
- 3.6.25

Field drains and a pipe were identified, as were several linear responses which might represent ridge and furrow cultivation and a former field boundary. Magnetic disturbance due to demolished farm buildings was also recorded.

3.7 KBoAD (B): Fleet Marston (SMA074)

Introduction

- 3.7.1

A geophysical survey was conducted over a predefined site at Fleet Marston, Buckinghamshire (NGR: SP 7720 1600; Figure CH-004-11.55, SMA074). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

<sup>54</sup> OS, (2013).

*The site*

- 3.7.2
- The survey area lies to the south of the A41 Bicester Road, approximately 6km north-west of the centre of Aylesbury. It is in the parish of Fleet Marston and Aylesbury Vale District (CH-004.11.55). At the time of the survey the site comprised a single flat field under crop stubble enclosing approximately 14.6ha (Figure CH-004-11.56).
- 3.7.3
- The site bedrock is recorded as mudstones of the Ampthill Clay Formation. No superficial deposits have been recorded<sup>55</sup>. The soils in the area are classified as slowly-permeable, seasonally-waterlogged clayey soils with fine loamy over clayey soils of the Denchworth (712b) association<sup>56</sup>.

*Summary archaeological/historic background*

- 3.7.4
- The following information is summarised from the records of the Buckinghamshire HER.
- 3.7.5
- The site is to the immediate west of a Romano-British small town at Fleet Marston. This settlement extended along Roman Akeman Street to the north-west of a presumed fording point on the River Thame. Large quantities of Roman artefacts have been retrieved from the area, and geophysical surveys have indicated the presence of pits and ditched property boundaries.
- 3.7.6
- A number of major Roman roads converged on the town, and there is also evidence for a series of more minor roads and trackways in the area. The projected line of Akeman Street, which ran between modern St Albans and Cirencester cuts through the southern part of the survey site on a north-west/south-eastern alignment (Figure CH-004-11.58).
- 3.7.7
- The medieval village of Fleet Marston lay to the east of the survey site. This village declined during the 15th century and was eventually deserted. Geophysical surveys of the village site have identified a dense concentration of settlement activity including pits, tracks and ditched property boundaries.

**Methodology**

- 3.7.8
- All survey work was carried out in accordance with current English Heritage guidelines<sup>57</sup> and a written scheme of investigation<sup>58</sup>.
- 3.7.9
- All survey grid positioning was carried out using Trimble R8 RTK VRSNow equipment. The geophysical survey area was georeferenced relative to the OS National Grid by tying in to local detail. These tie-ins are presented in Figure CH-004-11.61. Please refer to this diagram when re-establishing the grid.
- 3.7.10
- The magnetometer survey data was collected using Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing was performed as appropriate using an in-house software package (GeoSuB), employing the

following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).

- 3.7.11
- Data are presented as greyscale and XY trace plots (Figures CH-004-11.57, CH-004-11.59, CH-004-11.61). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

**Limitations**

- 3.7.12
- See Limitations section for Site IBoAA(2).
- 3.7.13
- The site survey conditions were good. The land was flat and under a short crop stubble which caused no hindrance to the survey.

**Assumptions**

- 3.7.14
- All of the fields contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

**Results: description**

- 3.7.15
- See Figure CH-004-11.57. Numerous strong, well-defined linear and non-linear responses form a rectilinear pattern in the southern part of the survey area.
- 3.7.16
- Two broad and less well-defined anomalies traverse the centre of the site, running approximately east-north-east/west-south-west.
- 3.7.17
- A number of north-east/south-west-aligned weak linear dipolar anomalies are present in the northernmost half of the site. Numerous relatively weak broad parallel linear responses were detected in the southern half of the site. A few weak linear anomalies are aligned approximately east-north-east/west-south-west in the central part of the site.

**Results: interpretation**

*Archaeology/possible archaeology*

- 3.7.18
- See Figure CH-004-11.58. A well-defined group of ditch-like anomalies forms a clear rectilinear pattern in the southern part of the site. The regular pattern of these features becomes more complex at the south-eastern limit of the survey site. Gaps in the linear responses may be genuine, indicating entrances into the plots, or the result of plough damage. Numerous pit-like responses are visible in the data amongst the linear anomalies. This complex is typical of a ladder settlement. It straddles the line of Roman Akeman Street (SMA076) and appears to extend beyond the survey limits to the south, east and west.

<sup>55</sup> British Geological Survey; Geology of Britain Viewer.  
<sup>56</sup> SSEW, (1983).  
<sup>57</sup> English Heritage, (2008).  
<sup>58</sup> Cotswold Archaeology, (2013).

*Agriculture and drainage*

- 3.7.19
- Numerous north-north-west/south-south-east-aligned broad but weak linear responses are present in the southern half of the site. These anomalies are characteristic of ridge and furrow cultivation.
- 3.7.20
- A broad but relatively weak and fragmented linear response in the centre of the site is aligned approximately east-north-east/west-south-west. This feature corresponds with an old field boundary shown on historic mapping. Approximately 280m north of this feature a band of magnetic disturbance correlates with a tree-lined track depicted on the 1st edition OS map<sup>59</sup>.
- 3.7.21
- The numerous weak dipolar linear anomalies in the northern half of the site are likely to relate to field drains.

*Uncertain*

- 3.7.22
- The weak north-east/south-west-aligned linear anomalies in the centre of the site are of uncertain origin. As they are broadly parallel with the former field boundary which lies to the south they may be of agricultural origin.

Conclusions

- 3.7.23
- The geophysical survey detected a probable ladder settlement adjacent to Roman Akeman Street.
- 3.7.24
- The alignments of a field boundary and a tree-lined track were recorded by the survey. Both of these features are visible on historic cartographic sources.
- 3.7.25
- Evidence for ridge and furrow cultivation was recorded, as were a few trends likely to be of agricultural origin. A field drainage system was also identified.

3.8 KBoAD (C): Fleet Marston (SMA074)

Introduction

- 3.8.1
- A geophysical survey was conducted over a predefined area at Fleet Marston, Buckinghamshire (NGR: SP 7720 1600; Figure CH-004-11.62, SMA074). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

*The site*

- 3.8.2
- The survey site lies to the south of the A41 Bicester Road, approximately 6km north-west of the centre of Aylesbury. It is in the parish of Fleet Marston and the Aylesbury Vale District

(Figure CH-004-11.62). At the time of the survey, the site comprised a single flat field under crop stubble, enclosing approximately 6.6ha (Figure CH-004-11.63).

- 3.8.3
- The site's bedrock is recorded as mudstones of the Ampthill Clay Formation. No superficial deposits have been recorded<sup>60</sup>. The soils in the area are classified as slowly-permeable, seasonally-waterlogged clayey soils with fine loamy over clayey soils of the Denchworth (712b) association<sup>61</sup>.

*Summary archaeological/historic background*

- 3.8.4
- See Summary archaeological/historic background section for KBoAD(B).

Methodology

- 3.8.5
- All survey work was carried out in accordance with current English Heritage guidelines<sup>62</sup> and a written scheme of investigation<sup>63</sup>.
- 3.8.6
- All survey grid positioning was carried out using Trimble R8 RTK VRSNow equipment. The geophysical survey area was georeferenced relative to the OS National Grid by tying in to local detail. These tie-ins are presented in Figure CH-004-11.67. Please refer to this diagram when re-establishing the grid.
- 3.8.7
- The magnetometer survey data was collected using Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing has been performed as appropriate using an in-house software package (GeoSuB), employing the following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).
- 3.8.8
- Data are presented as greyscale and XY trace plots (Figures CH-004-11.64 and CH-004-11.66). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

Limitations

- 3.8.9
- See Limitations section for site IBoAA(2).
- 3.8.10
- The site survey conditions were good. The land was flat and under a short crop stubble which caused no hindrance to the survey.

<sup>60</sup> British Geological Survey, Geology of Britain Viewer.  
<sup>61</sup> SSEW, (1983).  
<sup>62</sup> English Heritage, (2008).  
<sup>63</sup> Cotswold Archaeology, (2013).

<sup>59</sup> OS, (2013).



Assumptions

- 3.8.11 All of the fields contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

Results: description

- 3.8.12 See Figure CH-004-11.64. A strong positive/negative/positive chain of responses traverses the site on an approximate north/south alignment.
- 3.8.13 Two curvilinear positive magnetic responses lie to the east of centre in the site.
- 3.8.14 Long parallel positive magnetic linear responses aligned north-east/south-west are in evidence in the eastern part of the site.
- 3.8.15 There are three zones of densely-packed dipolar anomalies around the northern edge of the survey.

Results: interpretation

Archaeology/possible archaeology

- 3.8.16 See Figure CH-004-11.65. Two oval positive magnetic anomalies to the east of centre in the site have been categorised as possible archaeology. The northernmost of these anomalies measures approximately 40m in diameter and the southernmost 20m, although they appear to be incomplete. The responses are also partially masked by a strong magnetic shadow from a nearby pipe. Due to the isolated nature of the oval responses and the lack of supporting evidence, they cannot be considered as definite archaeological responses.

Agriculture and drainage

- 3.8.17 A linear response detected to the immediate west of the oval anomalies is likely to be a field drain.
- 3.8.18 Parallel linear responses in the eastern end of the site were almost certainly caused by ridge and furrow cultivation.

Modern

- 3.8.19 A very strong ferrous response has been caused by a pipe running along the former line of a drain denoted on the historic mapping of the area<sup>64</sup>.
- 3.8.20 Small discrete zones of magnetic disturbance have been detected. These appear to relate to spreads of magnetic material, possibly associated with rerouting of the A41.

Conclusions

- 3.8.21 Two possible small oval enclosures have been detected. The isolated nature of the responses and the weak magnitude of the magnetic anomalies mean that a more precise interpretation cannot be made.
- 3.8.22 Anomalies relating to ridge and furrow cultivation and drainage have also been detected, as has a modern service pipe.

3.9 KBoAD (D): Fleet Marston (SMAo74)

Introduction

- 3.9.1 A geophysical survey was conducted over a predefined area at Fleet Marston, Buckinghamshire (NGR: SP 7680 1600; Figure CH-004-11.68). The aim of the survey was to locate and characterise any anomalies of possible archaeological interest within the survey site.

The site

- 3.9.2 The survey area lies to the south of the A41 Bicester Road, approximately 6km north-west of the centre of Aylesbury (Figure CH-004-11.68). It is in the parish of Waddesdon and Aylesbury Vale District. At the time of the survey the site comprised two flat fields under a short cereal crop enclosing a total of approximately 21.4ha (Areas 1 and 2, Figure CH-004-11.69).
- 3.9.3 The site's bedrock is recorded as mudstones of the Ampthill Clay Formation. No superficial deposits have been recorded<sup>65</sup>. The soils in the area are classified as slowly-permeable, seasonally-waterlogged clayey soils with fine loamy over clayey soils of the Denchworth (712b) association<sup>66</sup>.

Summary archaeological/historic background

- 3.9.4 See Summary archaeological/historic background section for Site KBoAD(B).

Methodology

- 3.9.5 All survey work was carried out in accordance with current English Heritage guidelines<sup>67</sup> and a written scheme of investigation<sup>68</sup>.
- 3.9.6 All survey grid positioning was carried out using Trimble R8 RTK VRSNow equipment. The geophysical survey area was georeferenced relative to the OS National Grid by tying in to

<sup>65</sup> British Geological Survey; Geology of Britain Viewer.  
<sup>66</sup> SSEW, (1983).  
<sup>67</sup> English Heritage, (2008).  
<sup>68</sup> Cotswold Archaeology, (2013).

<sup>64</sup> OS, (2013).

local detail. These tie-ins are presented in Figure CH-004-11.76). Please refer to this diagram when re-establishing the grid.

- 3.9.7
- The magnetometer survey data was collected using Bartington Grad 601-2 fluxgate gradiometers, collecting data every 0.25m along traverses 1m apart. Data processing was performed as appropriate using an in-house software package (GeoSuB), employing the following processing steps: zero mean sensor, step correction (de-stagger) and interpolation (on the Y axis).
- 3.9.8
- Data are presented as greyscale and XY trace plots (Figures CH-004-11.70, CH-004-11.72, CH-004-11.73, CH-004-11.74, CH-004-11.75). The former enables simple feature identification and basic interpretation whilst the latter allows for analysis of the shape of the individual anomalies in order to better characterise the recorded responses.

Limitations

- 3.9.9
- See Limitations section for Site IBoAA(2).
- 3.9.10
- The site survey conditions were good. The land was flat and under a short cereal crop which caused no hindrance to the survey.

Assumptions

- 3.9.11
- All of the fields contain small-scale ferrous anomalies, most clearly represented by sharp 'spikes' in the XY trace plots. These are typically assumed to be modern debris within the topsoil unless the site type or prior knowledge suggests otherwise.

Results: description

- 3.9.12
- See Figure CH-004-11.70. The results are dominated by regular, parallel, linear responses made up of many dipolar magnetic anomalies. The responses in Area 1 are orientated west-north-west/east-south-east; the responses in Area 2 are aligned north-north-west/south-south-east.
- 3.9.13
- A pair of broad weakly magnetic linear responses runs across the southern part of the site on a west-north-west/east-south-east alignment.
- 3.9.14
- The southern part of Area 2 contains a number of linear, curvilinear and isolated positive magnetic responses.
- 3.9.15
- A small number of discontinuous linear anomalies have been detected towards the western edge of Area 1, and there are three zones of densely-packed dipolar anomalies around the edges of this area.

Results: interpretation

Archaeology/possible archaeology

- 3.9.16
- See Figure CH-004-11.71. A group of linear anomalies [1] measuring approximately 40m by 65m has been detected in the south-central part of Area 2. These anomalies apparently represent part of an enclosure. They extend beyond the survey area.
- 3.9.17
- There are a number of anomalies within enclosure [1]. Three of these anomalies feed directly off the main enclosure, forming possible internal sub-divisions. The remaining anomalies [2] in the enclosure are less certain in nature. They are visible both as discrete anomalies and as a general zone of increased response. It is likely that many of these anomalies are archaeological in origin, but it is not possible to differentiate between archaeological responses and natural soil variation within this complex data.
- 3.9.18
- A pair of linear anomalies [3] runs across the southern part of the site on a west-north-west/east-south-east alignment. The southern parallel anomaly is visible within Area 2 only, while the northern anomaly continues across Area 2 and through Area 1. The relationship between these features and enclosure [1] is unclear. The southernmost of the parallel anomalies is much broader and more prominent than the northern feature. These responses run parallel to the projected line of Roman Akeman Street (SMA076) and may represent roadside ditches, although they are a few metres to the south of the projected alignment of the ancient thoroughfare.
- 3.9.19
- A number of positive magnetic anomalies [4] have been detected on the extreme western edge of Area 1. These have been categorised as possible archaeology.

Drainage

- 3.9.20
- Very prominent parallel linear responses have been detected throughout the site. These have almost certainly been caused by field drainage systems.

Modern

- 3.9.21
- Small discrete zones of magnetic disturbance have been detected within Area 1. These appear to relate to small spreads of magnetic material, most likely modern debris within the topsoil.

Uncertain origin

- 3.9.22
- Linear positive magnetic anomalies [5] aligned north-east/south-west have been detected along the southern edge of Area 2. These features are similar in form to the field drains detected throughout the site, but their alignment differs from that of the drainage system. As such, their origin is unclear.
- 3.9.23
- Further discrete anomalies in Area 2 are of uncertain origin. Although these anomalies have an archaeological appearance they are found in isolation and therefore a natural or modern origin cannot be ruled out.

## Conclusions

- 3.9.24 A possible enclosure and associated internal features have been detected within Area 2. This enclosure lies to the immediate south of the projected line of Roman Akeman Street (SMA076). A pair of linear anomalies probably represent the ditches flanking the Roman road.
- 3.9.25 Further anomalies of a possible archaeological origin have been detected at the western limit of Area 1. A number of discrete anomalies within the site may also be of archaeological origin, although their interpretation is less clear.

## 3.10 References

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## 3.11 Figures

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## 4 Fieldwalking surveys

### 4.1 Site KBoAD(A–D): Fleet Marston

#### Introduction

- 4.1.1 On 2–18 April 2013 an archaeological fieldwalking survey was carried out on a site near Fleet Marston Farm, Buckinghamshire (site code: KBoAD; centred on National Grid Reference (NGR): SP 7749 1557; Figure CH-004-11.77).
- 4.1.2 The site was separated into five areas (A–E; Figure CH-004-11.78). The main body of the site (Areas A–D) is within the Stoke Mandeville and Aylesbury community forum area and is the subject of this report. The site's westernmost field (Area E, Field 7) is within the Waddesdon and Quainton community forum area and is reported on in Volume 5: Appendix CH-004-012.
- 4.1.3 The objective of the survey was to provide further information on the archaeological potential of the survey site.

#### *The site*

- 4.1.4 The survey site lies in rural land on the southern side of the A41 on the opposite side of the road to Fleet Marston Farm (Figure CH-004-11.77).
- 4.1.5 Areas A–D enclose a total of approximately 60 ha. At the time of the survey, these areas comprised a series of agricultural and pastoral fields, with boundaries marked by hedgelines and modern fencing.
- 4.1.6 The site is generally flat with gentle undulations, although Fields 1 and 2 display a pronounced plateau in their eastern half. This plateau slopes down to the west and south.
- 4.1.7 The site's bedrock geology is recorded as mudstones of the Kimmeridge and Ampthill Clay Formations. These sedimentary bedrocks formed 145–200 million years ago, in the Jurassic Period.<sup>69</sup>
- 4.1.8 Where recorded, the site's superficial deposits comprise Mid Pleistocene Till and Head deposits. These clays, silts, sands and gravels formed up to two million years ago, in the Quaternary Period<sup>70</sup>.

#### *Summary archaeological/historic background*

- 4.1.9 The following information is summarised from the records of the Buckinghamshire HER.
- 4.1.10 The site is to the immediate west of a Romano-British small town at Fleet Marston. This town extended along Roman Akeman Street to the north-west of a presumed fording point on the River Thames. Large quantities of Roman artefacts have been retrieved from the area and geophysical surveys have indicated the presence of pits and ditched property boundaries.

- 4.1.11 A number of major Roman roads converged on the town and there is also evidence for a series of more minor roads and trackways in the area. The projected line of Akeman Street (SMA076), which ran between St Albans and Cirencester cuts through the survey site on a north-west/south-eastern alignment (Figure CH-004-11.78).
- 4.1.12 The medieval village of Fleet Marston lay to the east of the survey site. This village declined during the 15th century and was eventually deserted. Geophysical surveys of the village site have identified a dense concentration of settlement activity, including pits, tracks and ditched property boundaries.
- 4.1.13 A mound recorded within the site (Field 2; Figure CH-004-11.78) may represent a prehistoric round barrow; alternatively it may be a windmill mound or a tree ring.

#### Methodology

- 4.1.14 The fieldwalking survey was undertaken in accordance with a written scheme of investigation<sup>71</sup>. It was also in accordance with guidance issued by the Institute for Archaeologists<sup>72</sup> and English Heritage<sup>73</sup>.
- 4.1.15 The survey site was sub-divided into five areas (A–E) and the individual fields were numbered (1–7; Figure CH-004-11.78). This report deals with Areas A–D (Fields 1–6) only.
- 4.1.16 A series of transects was established within the individual fields using a Leica Smart Rover GPS. These transects were spaced at 20 m intervals. They were tied in to the Ordnance Survey grid and assigned alphabetic identifiers. The individual fields contained the following transects:
- Field 1: nine transects (A–I);
  - Field 2: 20 transects (A–T);
  - Field 3: 36 transects (A–AJ);
  - Field 4: 26 transects (A–Z);
  - Field 5: 23 transects (A–W); and
  - Field 6: 23 transects (A–W).
- 4.1.17 The fieldwalking team walked the length of these transects. A 2 m-wide corridor centred on each individual transect was observed as a basis for artefact collection.
- 4.1.18 The length of each transect was subdivided into a series of 20 m stints. Artefacts recovered from each individual stint were bagged together.
- 4.1.19 There was provision for artefacts considered by the survey team to be of special archaeological interest to be located individually using a Leica Smart Rover GPS. No such artefacts were recovered.

<sup>69</sup> British Geological Survey; Geology of Britain Viewer; [http://maps.bgs.ac.uk/geology\\_viewer\\_google/googleviewer.html](http://maps.bgs.ac.uk/geology_viewer_google/googleviewer.html). Accessed: 28 February 2013.

<sup>70</sup> British Geological Survey; Geology of Britain Viewer.

<sup>71</sup> Cotswold Archaeology, (2013), *HS2, Buckinghamshire: Written Scheme of Investigation for an Archaeological Fieldwalking Survey*.

<sup>72</sup> Institute for Archaeologists, (2008), *Standard and Guidance for Archaeological Field Evaluation*.

<sup>73</sup> English Heritage, (1991), *Management of Archaeological Projects 2*; English Heritage (2006) *Management of Research Projects in the Historic Environment (MoRPHE): Project Manager's Guide*.



- 4.1.20
- There was also provision for detailed fieldwalking at a greater resolution in areas where find concentrations were noted. It was decided on site, however, that there was no need for such intensification of survey.
- 4.1.21
- All artefacts were collected, with the exception of any materials positively identified as modern. Any large concentrations of certain materials such as stone, slag and tile were sampled only.

Limitations

- 4.1.22
- The effectiveness of fieldwalking surveys can be dependent on a number of factors, including land use, topography and weather conditions. Surveys are generally most effective on land which has been ploughed and where the ground surface is clearly visible, as these ground conditions facilitate movement of artefacts to the surface and aid subsequent artefact identification and retrieval.
- 4.1.23
- Fields 1, 2, 5 and 6 were in agricultural use and had been ploughed recently, forming excellent survey conditions. Fields 3 and 4 were covered by crop stubble with patches of grass. The soil surface was generally visible, however, and survey conditions were considered good.

Assumptions

- 4.1.24
- It is often assumed that the higher the quantity of recovered artefacts, the more extensive the corresponding below-ground archaeological remains. The converse of this is that if no (or only very limited) artefacts are recovered then it is assumed that there are no below-ground archaeological remains at the survey site. It should be noted, however, that different types of archaeological sites produce different quantities of artefactual material: for example, a medieval site may be associated with considerably more artefacts than an early prehistoric site, and a settlement site may produce more material than a ritual site which saw activity only during festivals. The limitations of fieldwalking should also be borne in mind: the amount of artefacts recovered can be dependent upon a number of environmental and land-use factors.

Results: description

- 4.1.25
- A brief description of each of the main periods/categories of recovered artefact is given below. A detailed report on the finds begins in Section 4.1.38 of this report. The artefact distributions are depicted on Figures CH-004-11.79–CH-004-11.94.

Prehistoric (pre-AD 43): worked flint and pottery (Figures CH-004-11.79–CH-004-11.82)

- 4.1.26
- A relatively small amount of worked flint was recovered. One piece of worked flint was retrieved from the north-westernmost corner of Field 6, and three pieces were recovered from the south-western corner of Field 5. This material was comprised of waste flakes, without secondary working or evidence for utilisation. None of the worked flints were closely dateable.

- 4.1.27
- Eleven pottery sherds dating to the Early to Middle Iron Age (700–100 BC) were recovered. This material displayed a general tendency towards the south-eastern edge of the site, with the majority of the sherds coming from the eastern edges of Fields 1 and 2 and the south-eastern corner of Field 3.

Roman (AD 43–410): pottery and ceramic building material (Figures CH-004-11.83–CH-004-11.86)

- 4.1.28
- A total of 2,417 sherds of Roman pottery were recovered from the site. This material ranged in date from Late Iron Age/Early Roman transitional forms (1st century AD) to the end of the Roman period (AD 410), with a weighting towards the 3rd and 4th centuries AD.
- 4.1.29
- A total of 2,286g of Roman brick and tile (ceramic building material) was also recovered. The majority of this material was unidentifiable, although flanged (tegula) and curved (imbrex) roofing tiles were present.
- 4.1.30
- The Roman material was concentrated in the southern half of the site and was particularly prevalent both along the projected line of Akeman Street (SMA076) and to the south of the thoroughfare. Dense clusters of Roman pottery and ceramic building material were visible within the eastern halves of Fields 1 and 2, and at the south-western boundary of Field 6.

Medieval (AD 1066–1539): pottery and Ceramic Building Material (Figures CH-004-11.87–CH-004-11.90)

- 4.1.31
- A total of 342 sherds of medieval pottery were recovered. The main clusters of this material were along the north-eastern edge of Field 3 and within Field 5.
- 4.1.32
- A small quantity (279g) of medieval roof tile was also retrieved. This material displayed a general distribution across the survey area.

Post-medieval/modern (AD 1540–present): pottery, Ceramic Building Material and slag (Figures CH-004-11.91–CH-004-11.94)

- 4.1.33
- A total of 130 sherds of post-medieval/modern pottery was retrieved, most of which dated to the 18th and 19th centuries. There was a distinct cluster of this material in the north-eastern part of Field 3, to the west of the Old Rectory Cottage, with further concentrations visible in the eastern half of Field 4 and the north-eastern corner of Field 5.
- 4.1.34
- A total of 15,410g of post-medieval/modern ceramic building material was recovered, the bulk of which comprised fragments of flat tile. This material was widely dispersed across the survey area, although it displayed a concentration in Field 5, particularly towards the south-western corner of the field.

Metallurgical residues (Figures CH-004-11.91–CH-004-11.94)

- 4.1.35
- A total of 282g of metallurgical residues was retrieved. This material was mainly comprised of small fragments of ironworking slag. This material displayed a general tendency towards the western part of the site, with 10 of the 15 slag findspots lying within Field 5.

- 4.1.36

Although generally undateable, two of the slag fragments (from Field 5, Transect O) derive from smelting furnaces of the kind common to the Late Iron Age, Roman and medieval periods. The small quantities of slag are consistent with small-scale ironworking, most likely smithing.
- 4.1.37

**The finds**
- 4.1.38

The following is a detailed report on the artefactual material recovered from the site during the fieldwalking survey.
- 4.1.39

The surface-collected finds were recorded directly to a Microsoft Access database and their positions (Field/Transect/stint) were plotted using ARCview GIS software. All pottery was quantified by sherd count and weight according to period, and a note was made of fabrics or vessel forms where discernible. Prehistoric worked flint was quantified by count and class (flakes/cores/tools) and ceramic building material was recorded by period, group and weight. The finds are discussed below according to period and category.
- Prehistoric worked flint*

4.1.40

Given the size of the survey area only a very small quantity of worked flint (four pieces) was recovered. All of these pieces are unpatinated dark grey flint with moderate to severe edge damage. All are waste flakes, without secondary working or evidence for utilisation. None of this material is closely dateable.

4.1.41

All of the worked flint was recovered from the westernmost fields (Fields 5–6). The flint group is small and is unlikely to signify anything greater than 'background noise' relating to unspecific, transitory earlier prehistoric activity.

*Late prehistoric pottery*

4.1.42

Relatively small quantities of late prehistoric pottery (eleven sherds, weighing a total of 74g) were recovered. Most of this material consists of small bodysherds in handmade sandy, calcareous (limestone or fossil shell-tempered) or flint-tempered fabrics. One rimsherd from F6/H/20 probably comes from a jar-like vessel with a short, everted rim. None of this material was decorated.

4.1.43

In the absence of indications from vessel form or decoration, a broad Early to Middle Iron Age date is suggested for the group based on the fabrics and comparisons with better-dated excavated assemblages in the wider region.

4.1.44

The distribution of the late prehistoric group corresponds broadly to that of the Roman pottery described below. The significantly smaller quantities compared to the Roman material are probably a reflection of the lesser durability of the lower-fired Iron Age-type fabrics and their greater vulnerability in the plough soil.

*Roman pottery (including Late Iron Age/Early Roman 'transitional')*

- 4.1.45

This grouping represents the most common find type from the survey area, amounting to 2,417 sherds (17,030g). As would be expected for a surface-collected group, the assemblage is typically well-fragmented and abraded. The loss of surfaces can make identification of some types problematic.
- 4.1.46

Pottery characteristic of the Late Iron Age/Early Roman transition occurs mainly as wheel-thrown, grog-tempered fabrics, although shell-tempered types and some wheelthrown sandy wares also relate to this period. The few recognisable vessel forms consist of necked jars/bowls, a vessel with a pedestal base and a jar with a channel rim.
- 4.1.47

Among the 'fully' Roman assemblage, types of known or suspected local origin are ubiquitous across the survey area. Most abundant are sandy greywares and pink grog-tempered ware, a type common locally from Towcester (Northamptonshire) and sites in the North Buckinghamshire area. This pottery was produced at Stow Park in Buckinghamshire,<sup>74</sup> and probably at other local sites. The greywares and pink-grogged wares occur mainly as utilitarian jar and bowl/dish forms, together with a small number of beakers.
- 4.1.48

Shell-tempered wares are relatively poorly represented, possibly due in part to properties of lower robustness compared to other Roman types. Some at least are products of mainly later Roman production at Harrold, North Bedfordshire, and are represented as jars with undercut/hooked rims.
- 4.1.49

British fine and specialist types (mortaria) wares comprise mainly Oxfordshire red-slipped or whiteware products, with some Lower Nene Valley colour-coated wares also present. Dorset black-burnished wares also occur in small quantities.
- 4.1.50

Continental wares are present as small quantities of Gaulish samian and Baetican (southern Spanish) amphorae. The samian assemblage is small: just 19 sherds, or less than 1% of the total amount of Roman pottery recovered from the site. The condition of this group is poor and no attempt was made to determine fabric or region of manufacture. A single decorated bowl was discernible.
- 4.1.51

In terms of dating, activity would seem to extend throughout the Roman period, although there is a weighting towards the 3rd and 4th centuries AD. The commonly-occurring pink grog-tempered ware is a type produced after the mid or later 2nd century AD, continuing in production across the 3rd and 4th centuries AD. Oxford red-slipped wares date after circa AD 240.
- 4.1.52

The overall abundance and spatial extent of the Roman material is clearly indicative of a significant Roman site in the survey area. The main concentrations of material corresponded to the projected line of Akeman Street (SMA076) and the zone to the south of the road.
- 4.1.53

Fairly discrete pottery clusters occurred in Fields 1, 2, 3 and 6. Each of these fields included some very large stint groups: 91 sherds from F6/H/20; 62 sherds from F6/H/0; 46 sherds from F3/E/0; 45 sherds from F1/G/20. The main spread in Fields 2 and 3 extended along the length of the projected line of the Roman road in this area. The pottery concentration in Field 6 was

<sup>74</sup> Booth, P. M., (1999), Pink Grogged ware again. In: *Study Group for Roman Pottery Newsletter* 27, P 2–3.

- notably discrete, lying well to the east of the apparent 'focus' of activity in Field 2. The easternmost cluster, in Field 1, was also located at some distance (150m–200m) from the Roman road.
- 4.1.54 The 'transitional' and earlier Roman types, including the samian, tended to lie towards the main concentrations of material in Fields 1 and 2, with the 'transitional' material being most common at the western survey limits. This distribution suggests that the earliest activity at the site may lie in these areas.
- 4.1.55 Distinctly 'late' types, such as Oxford red slipped ware, were clustered within the main Field 2 concentration (close to the line of Akeman Street) and also in the north-eastern portion of Field 1.
- Roman Ceramic Building Material*
- 4.1.56 Roman brick/tile amounting to 2,286g was recovered from Fields 1–3 and 5–6. The majority comprises unfeatured fragments, where identification rests on fabric and thickness. Material identifiable to class is restricted to flanged (tegula) or curved (imbrex) roofing tiles. No systematic recording of tile fabric was undertaken, although examples in a shell-tempered fabric, almost certainly from the North Bedfordshire manufacturing site at Harrold,<sup>75</sup> were noted from Field 1.
- 4.1.57 The distribution of this material would seem to reflect that of the Roman pottery, with the greatest densities occurring in Field 2 and (particularly) Field 1. The overall quantities of Roman ceramic building material are not particularly large and given that brick/tile can occur on sites of differing size and status, this material cannot be regarded as clear evidence for the presence of 'higher status' buildings equipped with tiled roofs.
- Medieval pottery*
- 4.1.58 A total of 342 sherds (2,351g) of medieval pottery was recorded. As with the Roman material, the medieval group is heavily fragmented (the mean sherd weight is 6.8g) and most sherds are abraded, with few rim or other 'featured' sherds.
- 4.1.59 The assemblage mainly comprises unglazed coarsewares types, which are probably a mix of Hertfordshire greywares and products from the Brill/Boarstall kilns, which lay approximately 10km west of the survey site. Dating for this material spans the 13th to 15th centuries AD.
- 4.1.60 A smaller quantity of unglazed cooking pot-type fabrics occur in shelly, limestone-tempered and limestone/flint-gritted types. The dating for these types spans the 11th to 14th centuries AD. A factor affecting the limited incidence of these types may be their tendency to be lower-fired and potentially less durable when exposed within the plough soil.
- 4.1.61 The distribution of the medieval pottery reflects a very different pattern of activity to the Roman material. Densities are lower compared to the Roman group, in the range 1–8 sherds

per stint (compared to 1–91 sherds for the Roman assemblage), although comparisons across the two periods based on quantity alone can be misleading.

- 4.1.62 The quantity and spread of medieval pottery is suggestive of activity of greater intensity than might be expected from processes such as manuring. This material displayed tendencies towards two areas: the north-eastern fringes of Field 3 and much of Field 5.

*Medieval Ceramic Building Material*

- 4.1.63 A small quantity of roof tile (weighing 279g) was recovered from nine stints. This group comprises flat tile fragments in a yellow-orange fabric, measuring approximately 10mm–15mm in thickness. The medieval tile was distributed generally across Fields 3–6.

*Post-medieval/modern pottery*

- 4.1.64 Post-medieval and modern pottery amounting to 130 sherds (1,265g) was recovered. This group comprises mainly internally-glazed or unglazed earthenwares, English stonewares and refined whitewares (including creamwares and Mocha type wares). Most of this material dates to the 18th and 19th centuries. The distribution of this pottery reveals some clustering towards the north-eastern quadrant of Field 3 (west of the existing Old Rectory cottage) and within Field 4.

*Post-medieval/modern Ceramic Building Material*

- 4.1.65 Large quantities (15,410g) of post-medieval/modern ceramic building material were recovered from the site. The bulk of this material comprises fragments of flat tile, typically 15mm–20mm in thickness and occurring in a hard, red-firing sandy fabric. Recorded features include square peg holes. This category also encompasses ceramic land drain fragments.
- 4.1.66 The post-medieval/modern ceramic building material was widely dispersed across the survey area, although the bulk occurred in Fields 5 and 6 and an apparent cluster was visible in the south-western angle of Field 5. This pattern of distribution may have resulted from the dispersal of material dumped for improvement of drainage or traction.

*Metallurgical residues*

- 4.1.67 Quantities of metallurgical residues amounting to 282g were recovered from 15 grid locations, 10 of which were in Field 5. For the most part the recovered material consists of small fragments of ironworking slag which is indeterminate of process and might relate to iron smithing or iron smelting activities.
- 4.1.68 Fragments of moderately dense, lustrous slag with a 'ropey' structure, both from Field 5 Transect O (stints 100 and 140), are typical of the 'tap slags' derived from smelting furnaces of the kind common to the Late Iron Age, Roman and medieval periods. A fragment of dense, glassy slag from F5/A/220 is identified as blast furnace slag, which is post-medieval in date.
- 4.1.69 The small quantities of slag recovered from the site would be consistent with small-scale ironworking, most likely smithing.

<sup>75</sup> Brown, A., (1994), A Romano-British shell-tempered pottery and tile manufacturing site at Harrold, Bedfordshire, *Bedfordshire Archaeological Journal* 21, P 19–107.



## Results: interpretation

- 4.1.70 The very small assemblage of worked flint recovered from the site is unlikely to signify anything greater than 'background noise' relating to non-specific earlier prehistoric activity.
- 4.1.71 The small quantity of Early to Middle Iron Age pottery recovered from the site displayed a broadly similar distribution to the Roman artefacts, and may hint at a late prehistoric origin for some of the activity denoted by the large concentrations of Roman material.
- 4.1.72 The high quantities of Roman material recovered during the survey are consistent with the site's location on the outskirts of a Romano-British small town. This material was particularly prevalent along the projected line of Roman Akeman Street (SMA076). Further concentrations to the south of this thoroughfare, including dense clusters within the eastern halves of Fields 1 and 2 and at the south-western boundary of Field 6, may indicate the presence of Roman buildings.
- 4.1.73 The metallurgical residues recovered from the site probably relate to small-scale ironworking, most likely smithing. The date of this activity is uncertain: small quantities of the slag are broadly dateable to the Late Iron Age, Roman or medieval periods.
- 4.1.74 The quantities of medieval material recovered from the site are higher than might be expected from manuring alone. Although medieval artefacts were found throughout the site, a concentration along the north-eastern edge of Field 3 presumably represents activity on the fringes of medieval Fleet Marston. A second concentration in Field 5 indicates further activity in the western part of the site, perhaps associated with a medieval precursor to Cranwell Farm, which lies to the west of the site boundary.
- 4.1.75 Quantities of post-medieval/modern artefacts were recovered from across the site. It is likely that a significant proportion of this material was deposited in order to improve drainage or traction.
- 4.1.76 No prehistoric, Roman or medieval artefacts were retrieved from the immediate vicinity of the mound within Field 2, suggesting that it is a post-medieval feature.

## Conclusions

- 4.1.77 The survey recovered large quantities of Roman artefactual material, consistent with the site's location on the outskirts of Fleet Marston Romano-British small town. This material was particularly prevalent along the projected line of Roman Akeman Street (SMA076). Further concentrations to the south of this thoroughfare may indicate the presence of Roman buildings.
- 4.1.78 Small quantities of Early to Middle Iron Age pottery displayed a broadly similar distribution to the Roman artefacts, perhaps hinting at a late prehistoric origin for some of the activity denoted by the large concentrations of Roman material.
- 4.1.79 Relatively high quantities of medieval material were recovered. A concentration along the north-eastern edge of the site presumably represents activity on the fringes of medieval Fleet Marston. A second concentration at the western edge of the site may perhaps be associated with a medieval precursor to Cranwell Farm, which lies to the west of the site boundary.

- 4.1.80 Metallurgical residues recovered from the site provide evidence for small-scale ironworking, most likely smithing. The date of this activity is uncertain.

## 4.2 References

British Geological Survey; Geology of Britain Viewer; [http://maps.bgs.ac.uk/geology\\_viewer\\_google/googleviewer.html](http://maps.bgs.ac.uk/geology_viewer_google/googleviewer.html); Accessed: 28 February 2013.

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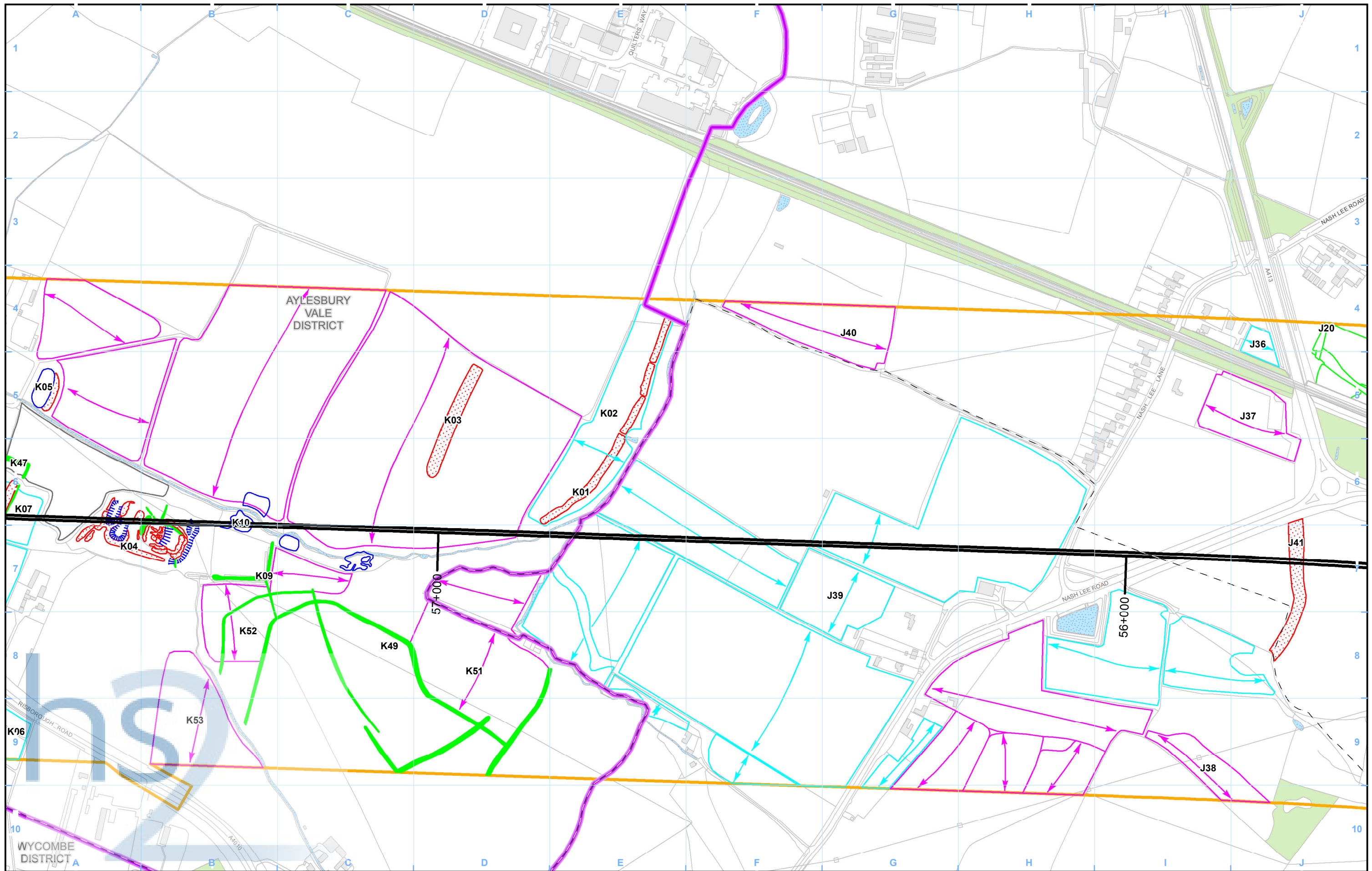
Cotswold Archaeology, (2013), *HS2, Buckinghamshire: Written Scheme of Investigation for an Archaeological Fieldwalking Survey*.

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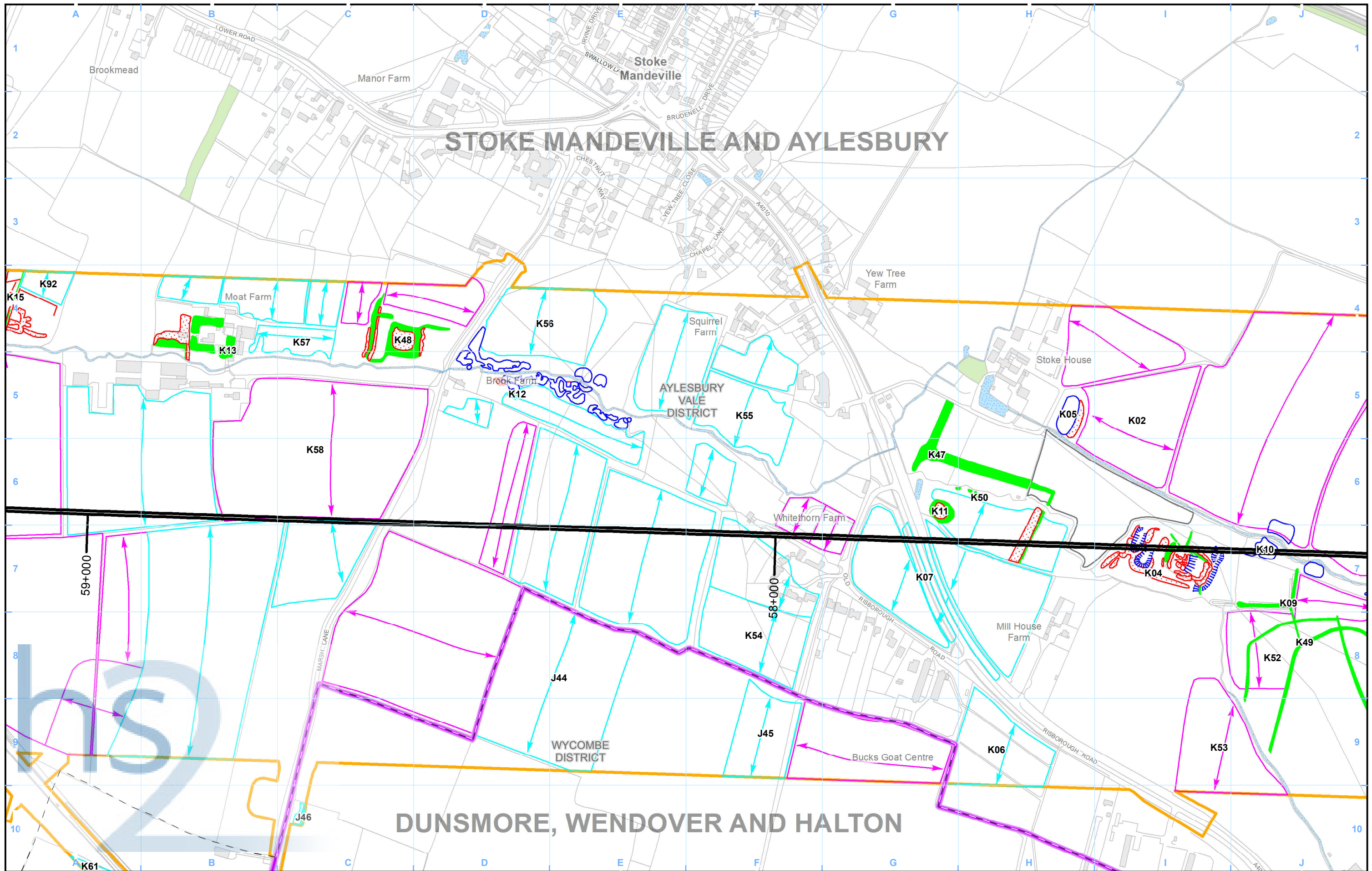
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CH-004-11.87	KBoAD(A-D): Medieval finds	1:3,000
CH-004-11.88	KBoAD(A-D): Medieval finds	1:3,500
CH-004-11.89	KBoAD(A-D): Medieval finds	1:2,000
CH-004-11.90	KBoAD(A-D): Medieval finds	1:3,500
CH-004-11.91	KBoAD(A-D): Post-medieval/modern finds and undated metal slag	1:3,000
CH-004-11.92	KBoAD(A-D): Post-medieval/modern finds and undated metal slag	1:3,500
CH-004-11.93	KBoAD(A-D): Post-medieval/modern finds and undated metal slag	1:2,000
CH-004-11.94	KBoAD(A-D): Post-medieval/modern finds and undated metal slag	1:3,500



<b>Legend</b> Route in tunnel Route on surface Community forum boundary District/Borough boundary Watercourse Water body Woodland	<b>Remote sensing survey boundary</b> Archaeological features Bank Ditch Extant ridge and furrow direction Levelled ridge and furrow direction Structure T-Hachure	<b>Extent of Area</b> Bank Ditch Extant ridge and furrow outline Levelled ridge and furrow outline Structure Large cut feature	<b>Location Map</b> 	<b>Map Number</b> CH-004-11.01 <b>Map Name</b> Remote Sensing Survey Interpretation Community Forum Area CFA11: Stoke Mandeville & Aylesbury	<p>ETM accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.</p> <p>© Crown copyright and database rights 2013. Ordnance Survey Licence Number 100049190.</p> <p>Scale at A3: 1:5,000</p> <p>Doc Number: C252-ETM-EV-MAP-020-002577-P03.00</p> <p>Date: 06/09/13</p>
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**Legend**

Route in tunnel	Remote sensing survey boundary	<b>Archaeological features</b>	Extent of Area
Route on surface		Bank	Bank
Community forum boundary		Ditch	Ditch
District/Borough boundary		Extant ridge and furrow direction	Extant ridge and furrow outline
Watercourse		Levelled ridge and furrow direction	Levelled ridge and furrow outline
Water body		Structure	Structure
Woodland		T-Hachure	Large cut feature

**Location Map**

Map Number: CH-004-11.02

Map Name: Remote Sensing Survey Interpretation

Community Forum Area CFA11: Stoke Mandeville & Aylesbury

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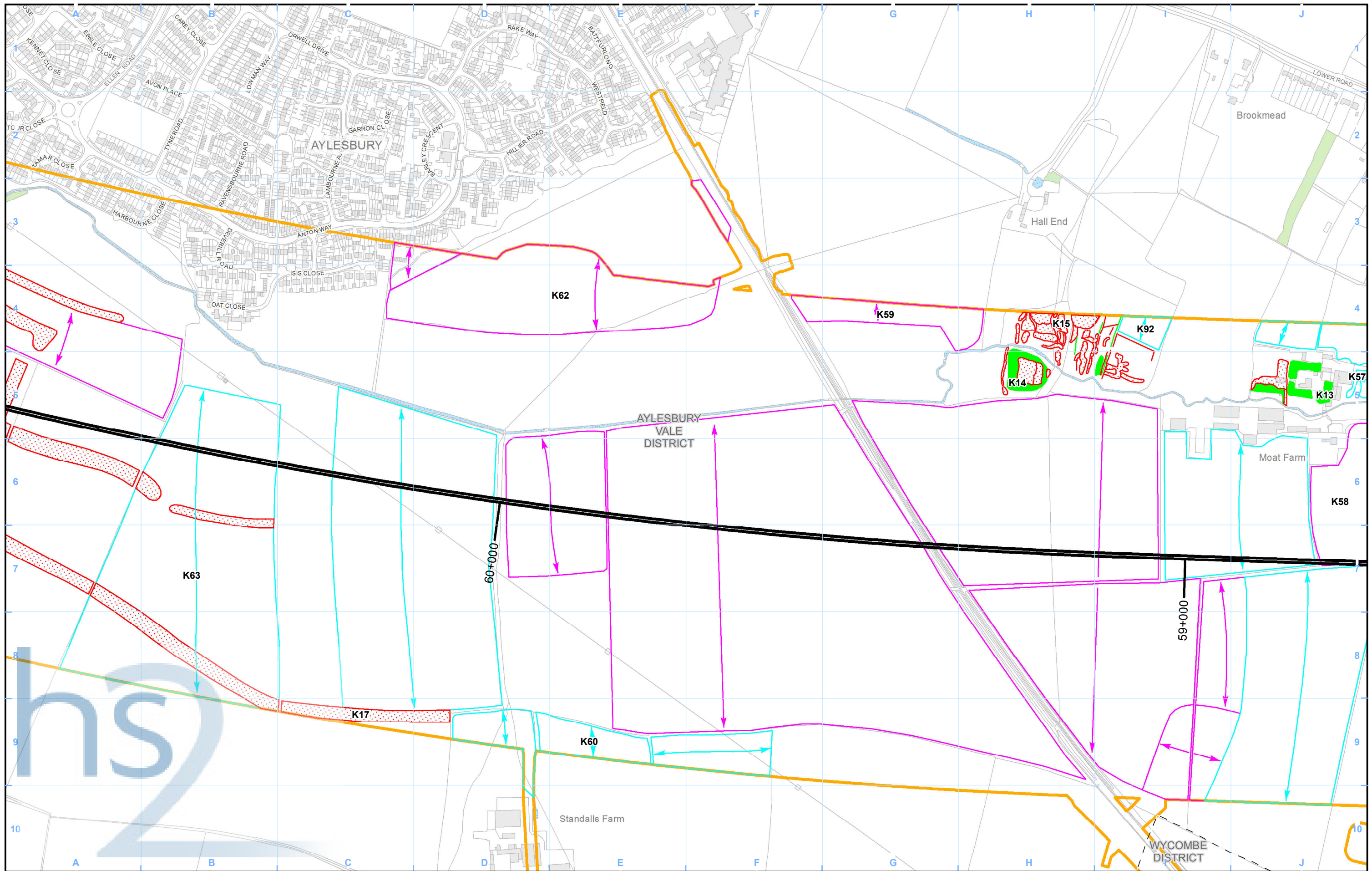
Scale at A3: 1:5,000

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Date: 06/09/13





**Legend**

Route in tunnel

Route on surface

Community forum boundary

District/Borough boundary

Watercourse

Water body

Woodland

Remote sensing survey boundary

Archaeological features

Bank

Ditch

Extant ridge and furrow direction

Levelled ridge and furrow direction

Structure

T-Hachure

Extent of Area

Bank

Ditch

Extant ridge and furrow outline

Levelled ridge and furrow outline

Structure

Large cut feature

**Location Map**

Map Number

CH-004-11.03

Map Name

Remote Sensing Survey Interpretation

Community Forum Area CFA11:  
Stoke Mandeville & Aylesbury

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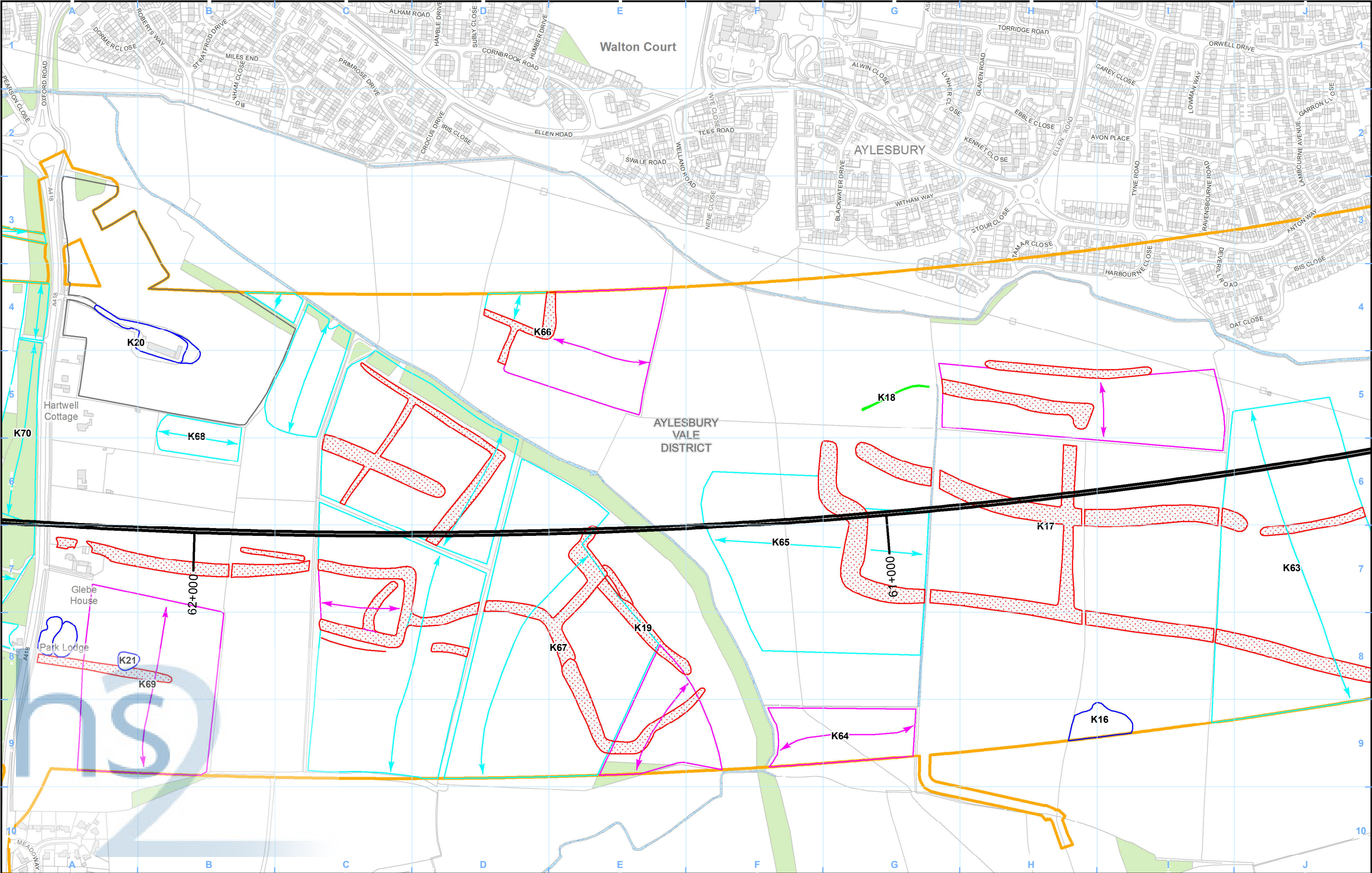
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Doc Number: C252-ETM-EV-MAP-020-002579-P03.00

Date: 06/09/13





**Legend**

Route in tunnel	Remote sensing survey boundary	<b>Archaeological features</b>	Extent of Area
Route on surface		Bank	Bank
Community forum boundary		Ditch	Ditch
District/Borough boundary		Extant ridge and furrow direction	Extant ridge and furrow outline
Watercourse		Levelled ridge and furrow direction	Levelled ridge and furrow outline
Water body		Structure	Structure
Woodland		T-Hachure	Large cut feature

**Location Map**

Map Number  
**CH-004-11.04**

Map Name  
**Remote Sensing Survey Interpretation**

Community Forum Area CFA11:  
Stoke Mandeville & Aylesbury

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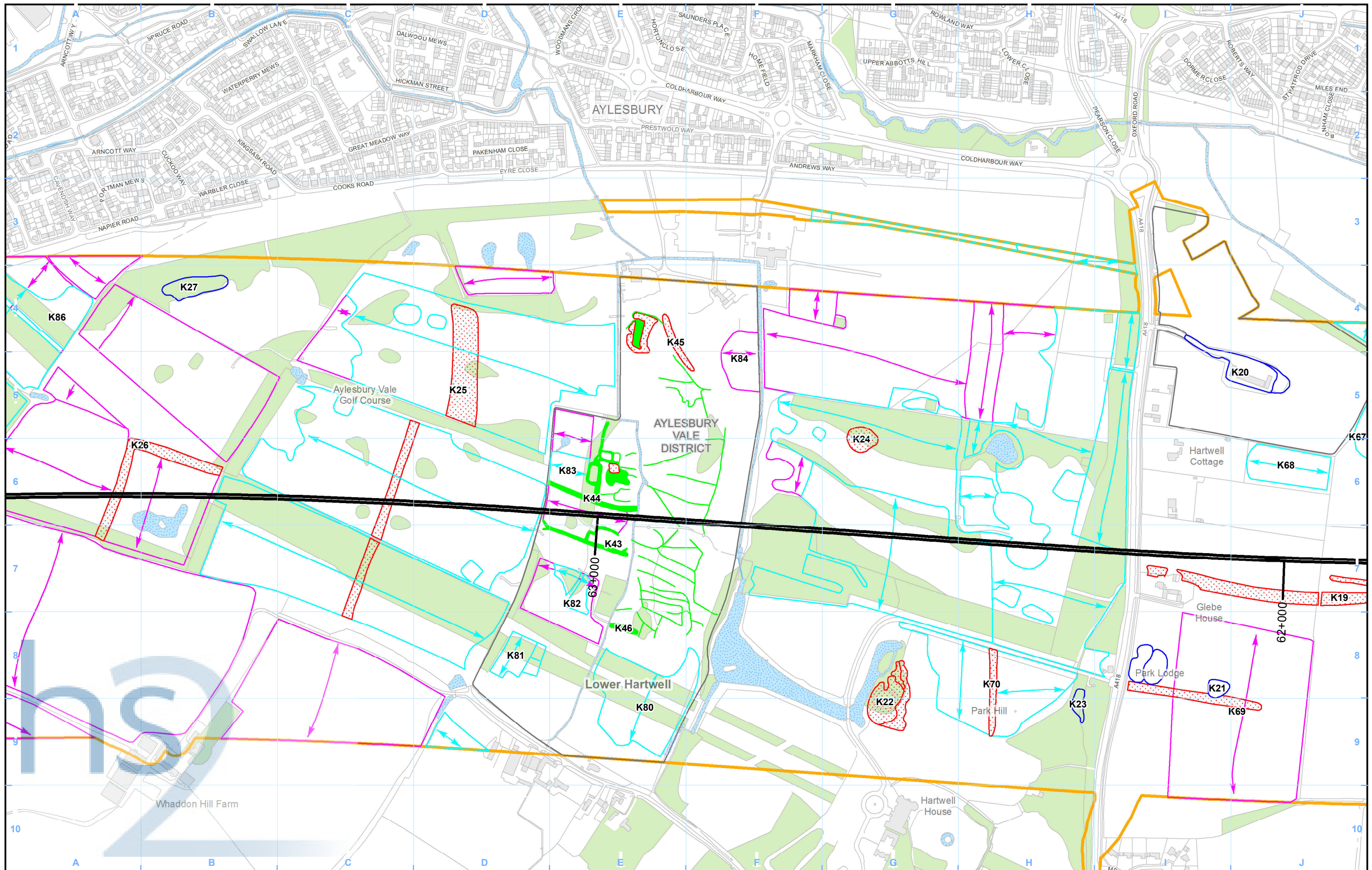
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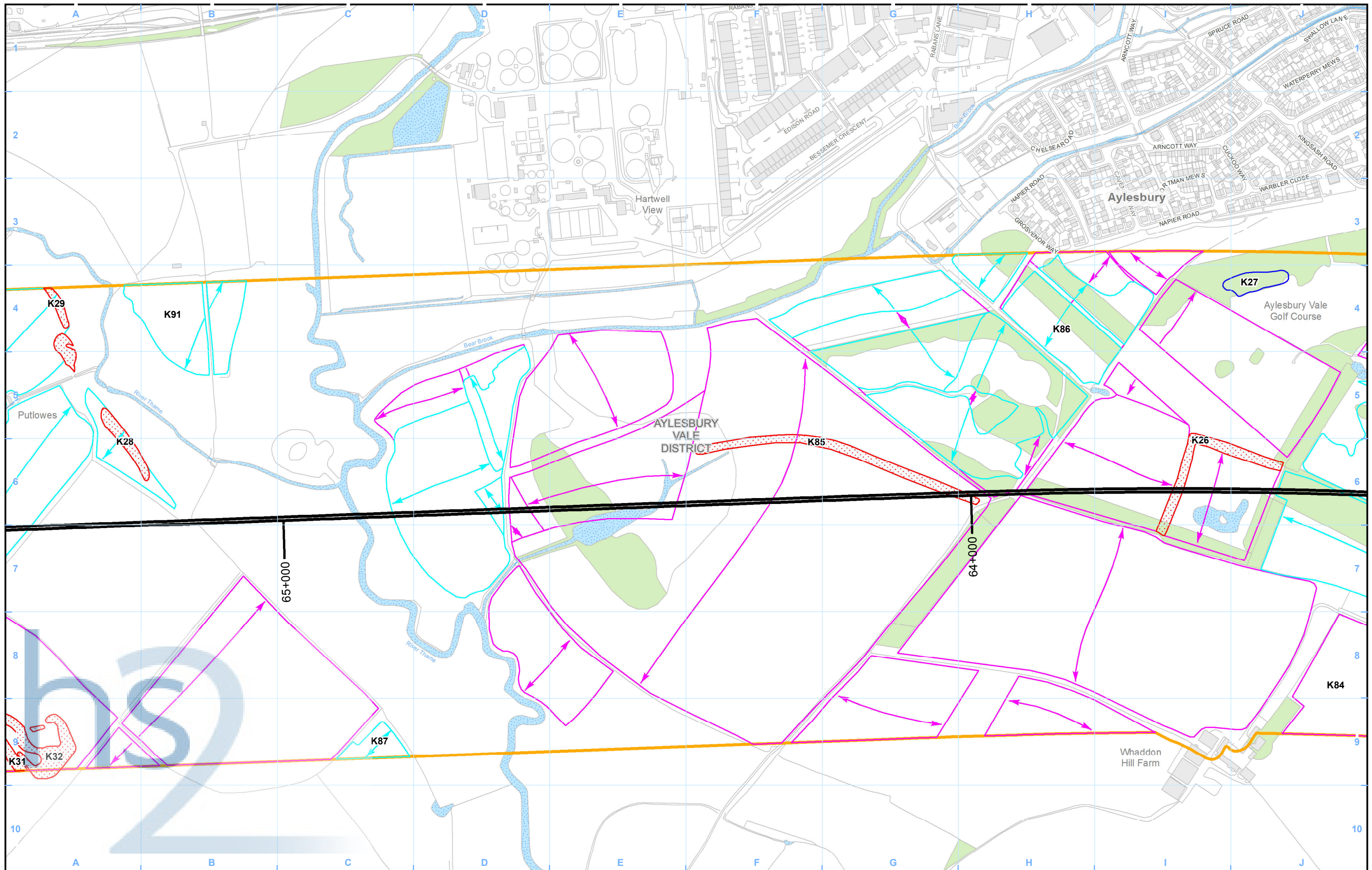
Date: 06/09/13





<b>Legend</b> Route in tunnel Route on surface Community forum boundary District/Borough boundary Watercourse Water body Woodland	<b>Remote sensing survey boundary</b> Archaeological features Bank Ditch Extant ridge and furrow direction Levelled ridge and furrow direction Structure T-Hachure	<b>Extent of Area</b> Bank Ditch Extant ridge and furrow outline Levelled ridge and furrow outline Structure Large cut feature	<b>Location Map</b> 	<b>Map Number</b> CH-004-11.05 <b>Map Name</b> Remote Sensing Survey Interpretation Community Forum Area CFA11: Stoke Mandeville & Aylesbury	<p>ETM accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.</p> <p>Scale at A3: 1:5,000</p> <p>© Crown copyright and database rights 2013. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: C252-ETM-EV-MAP-020-002581-P03.00</p> <p>Date: 06/09/13</p>
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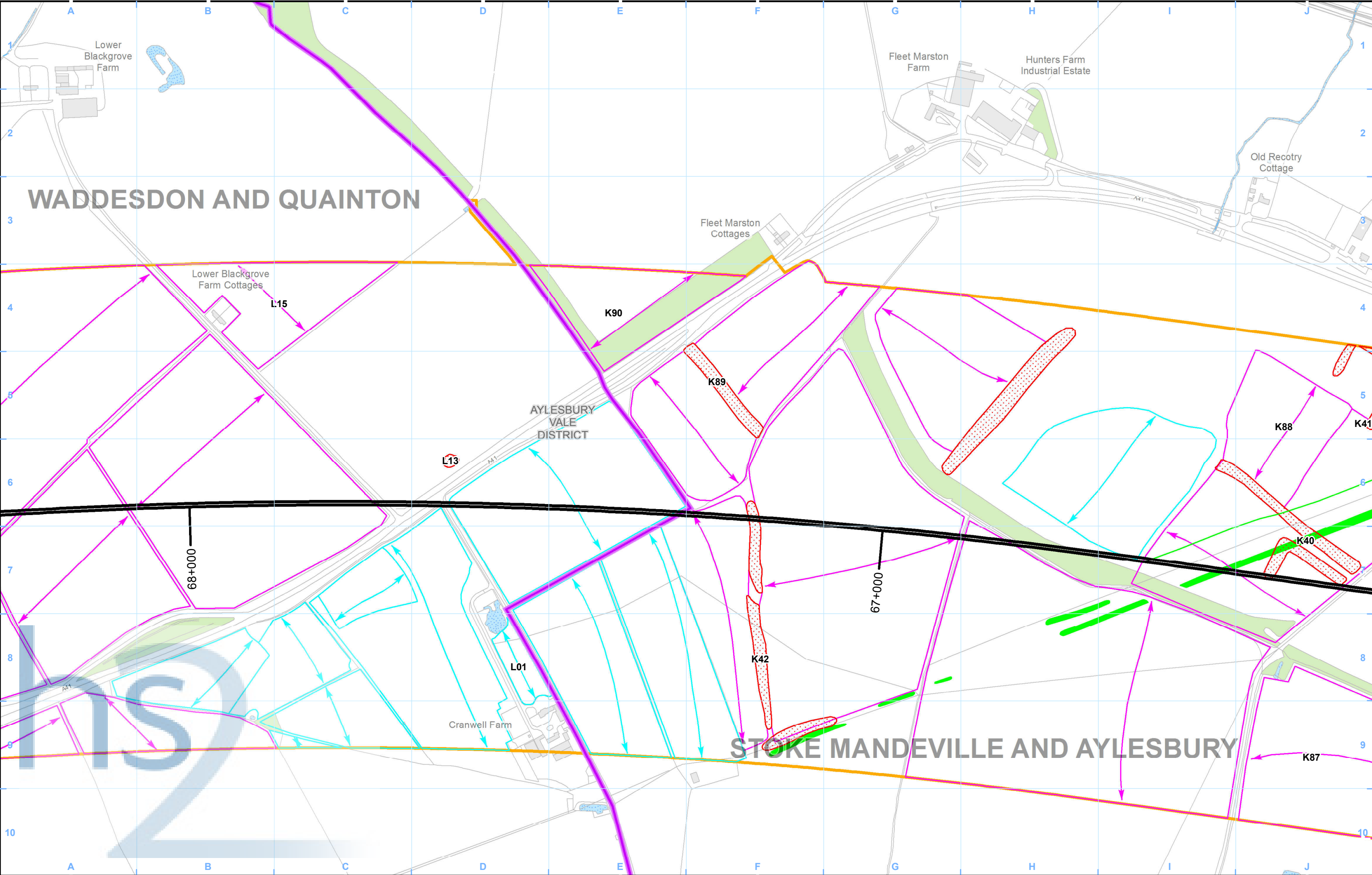


<b>Legend</b> Route in tunnel Route on surface Community forum boundary District/Borough boundary Watercourse Water body Woodland	<b>Remote sensing survey boundary</b> Archaeological features Bank Ditch Extant ridge and furrow direction Levelled ridge and furrow direction Structure T-Hachure	<b>Extent of Area</b> Bank Ditch Extant ridge and furrow outline Levelled ridge and furrow outline Structure Large cut feature	<b>Location Map</b> 	<b>Map Number</b> CH-004-11.06 <b>Map Name</b> Remote Sensing Survey Interpretation Community Forum Area CFA11: Stoke Mandeville & Aylesbury	<p>ETM accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.</p> <p>© Crown copyright and database rights 2013. Ordnance Survey Licence Number 100049190.</p> <p>Doc Number: C252-ETM-EV-MAP-020-002582-P03.00</p> <p>Date: 06/09/13</p>
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**Legend**

Route in tunnel

Route on surface

Community forum boundary

District/Borough boundary

Watercourse

Water body

Woodland

Remote sensing survey boundary

Archaeological features

Bank

Ditch

Extant ridge and furrow direction

Levelled ridge and furrow direction

Structure

T-Hachure

Extent of Area

Bank

Ditch

Extant ridge and furrow outline

Levelled ridge and furrow outline

Structure

Large cut feature

**Location Map**

Map Number

CH-004-11.08

Map Name

Remote Sensing Survey Interpretation

Community Forum Area CFA11:  
Stoke Mandeville & Aylesbury

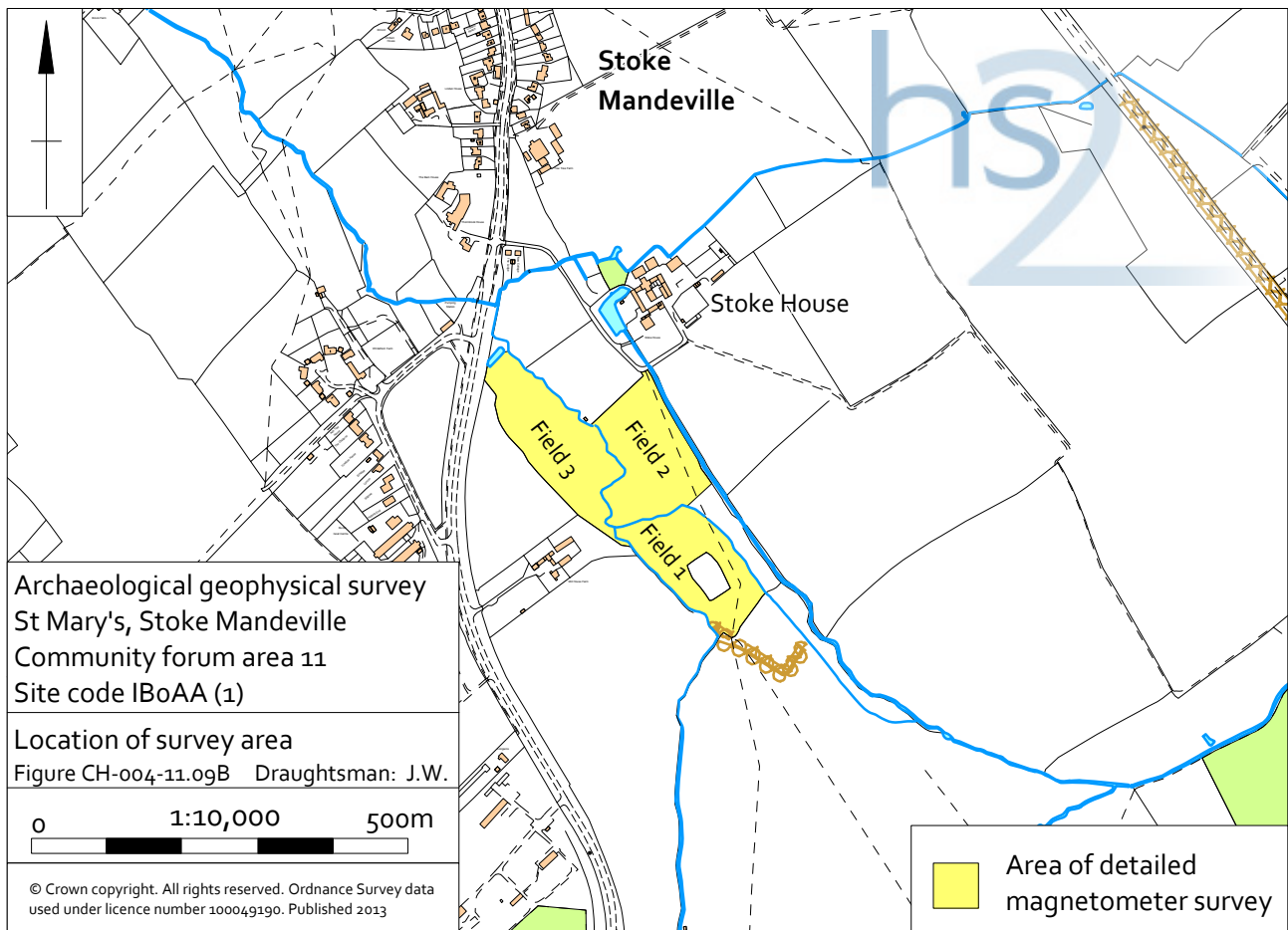
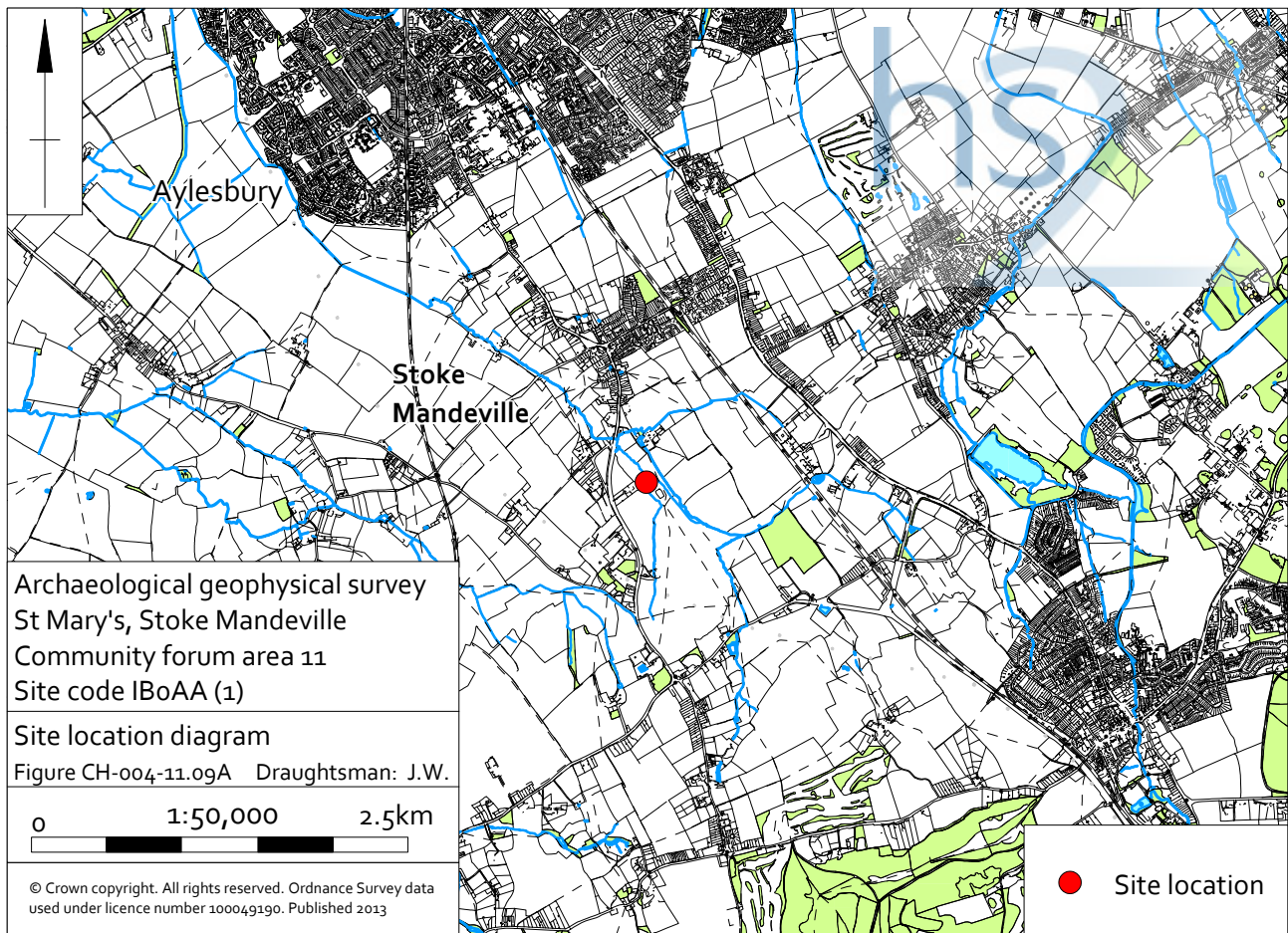
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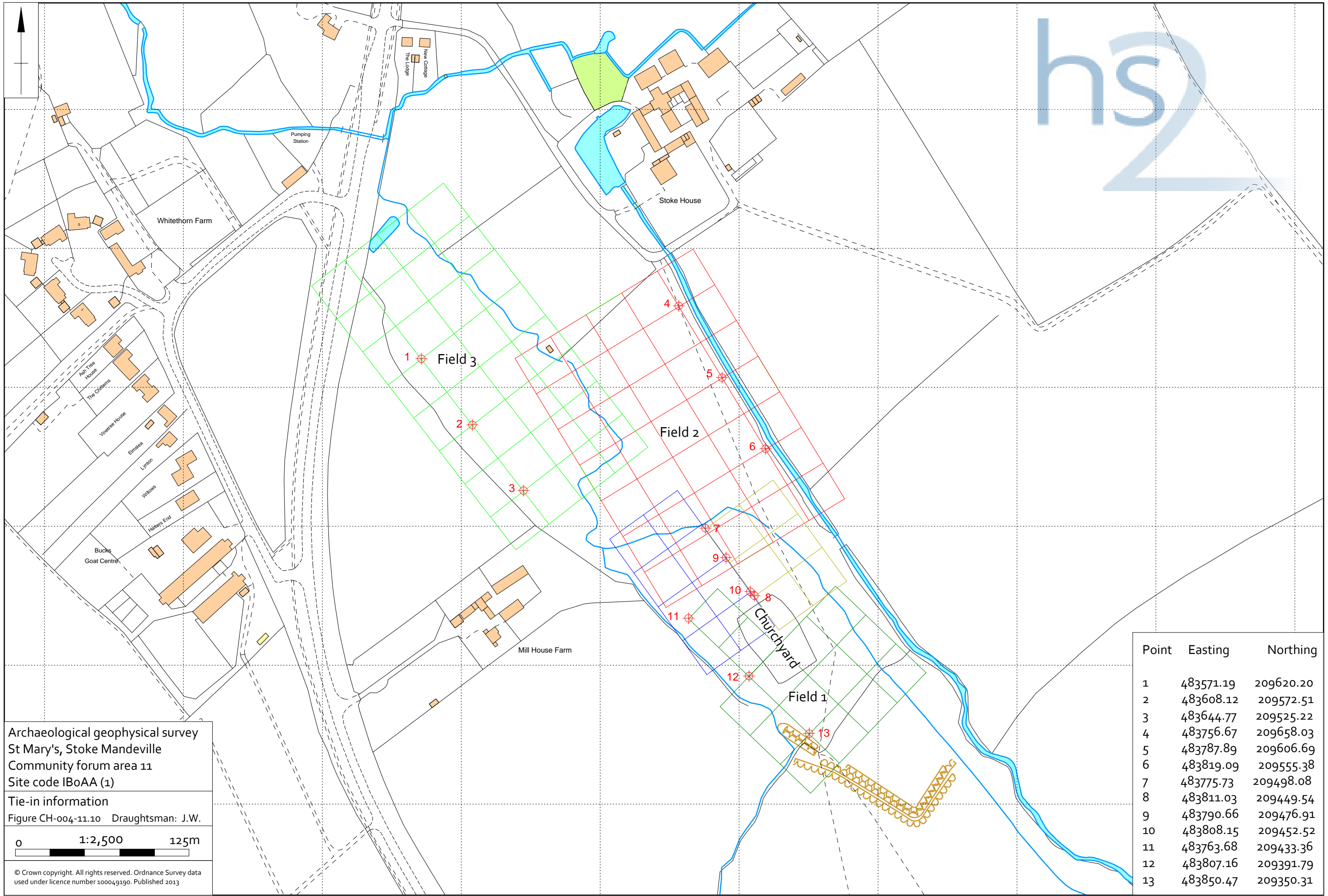
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Doc Number: C252-ETM-EV-MAP-020-002584-P03.00

Date: 06/09/13





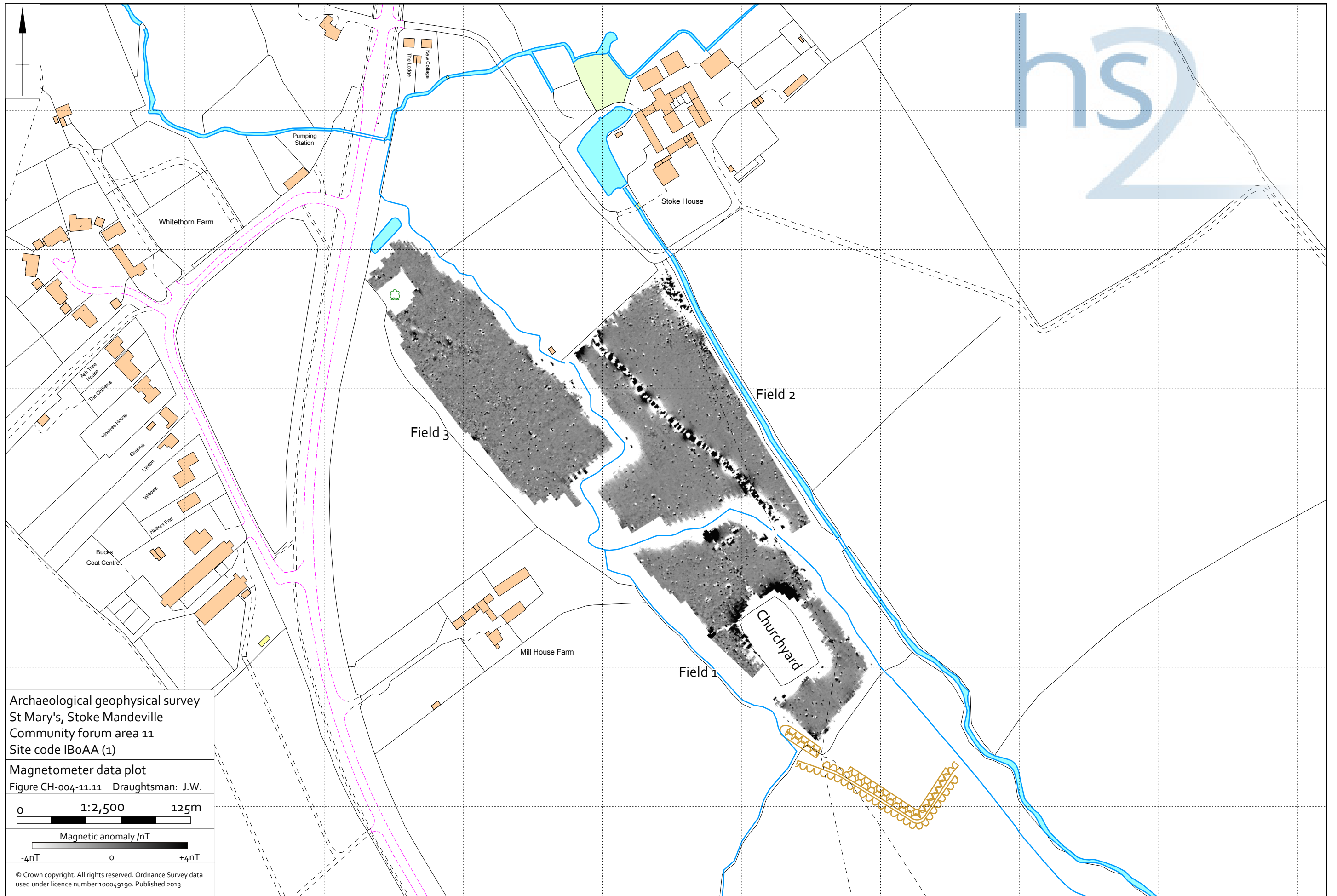


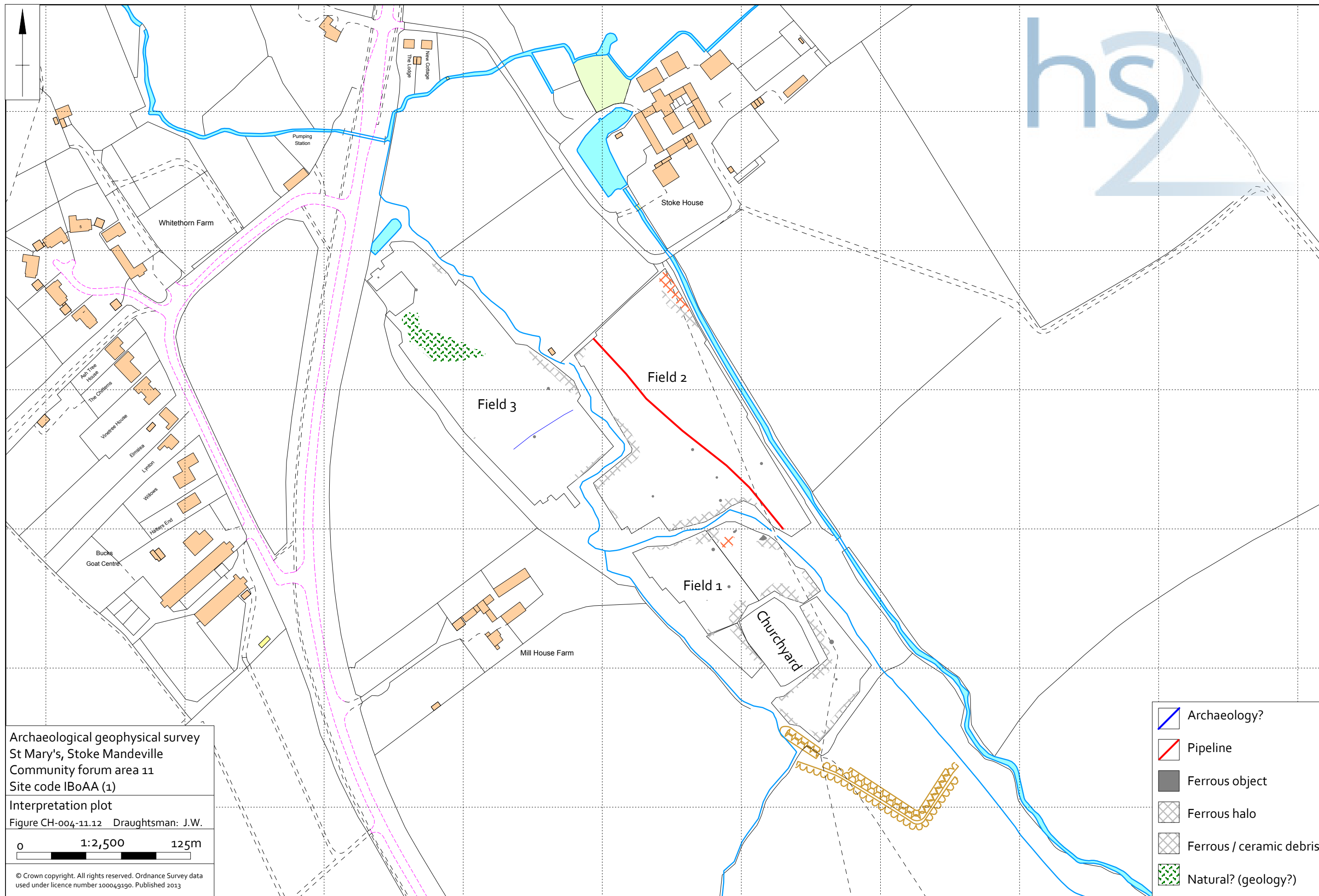
Archaeological geophysical survey  
St Mary's, Stoke Mandeville  
Community forum area 11  
Site code IBoAA (1)  
Tie-in information  
Figure CH-004-11.10 Draughtsman: J.W.

0 1:2,500 125m

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Point	Easting	Northing
1	483571.19	209620.20
2	483608.12	209572.51
3	483644.77	209525.22
4	483756.67	209658.03
5	483787.89	209606.69
6	483819.09	209555.38
7	483775.73	209498.08
8	483811.03	209449.54
9	483790.66	209476.91
10	483808.15	209452.52
11	483763.68	209433.36
12	483807.16	209391.79
13	483850.47	209350.31









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0 metres 2000

1:50,000 @ A3



Site Location

**Project:** G1317/2 HS2: C252 Country South  
CFA11 IB0AA(2) St Mary's Stoke Mandeville

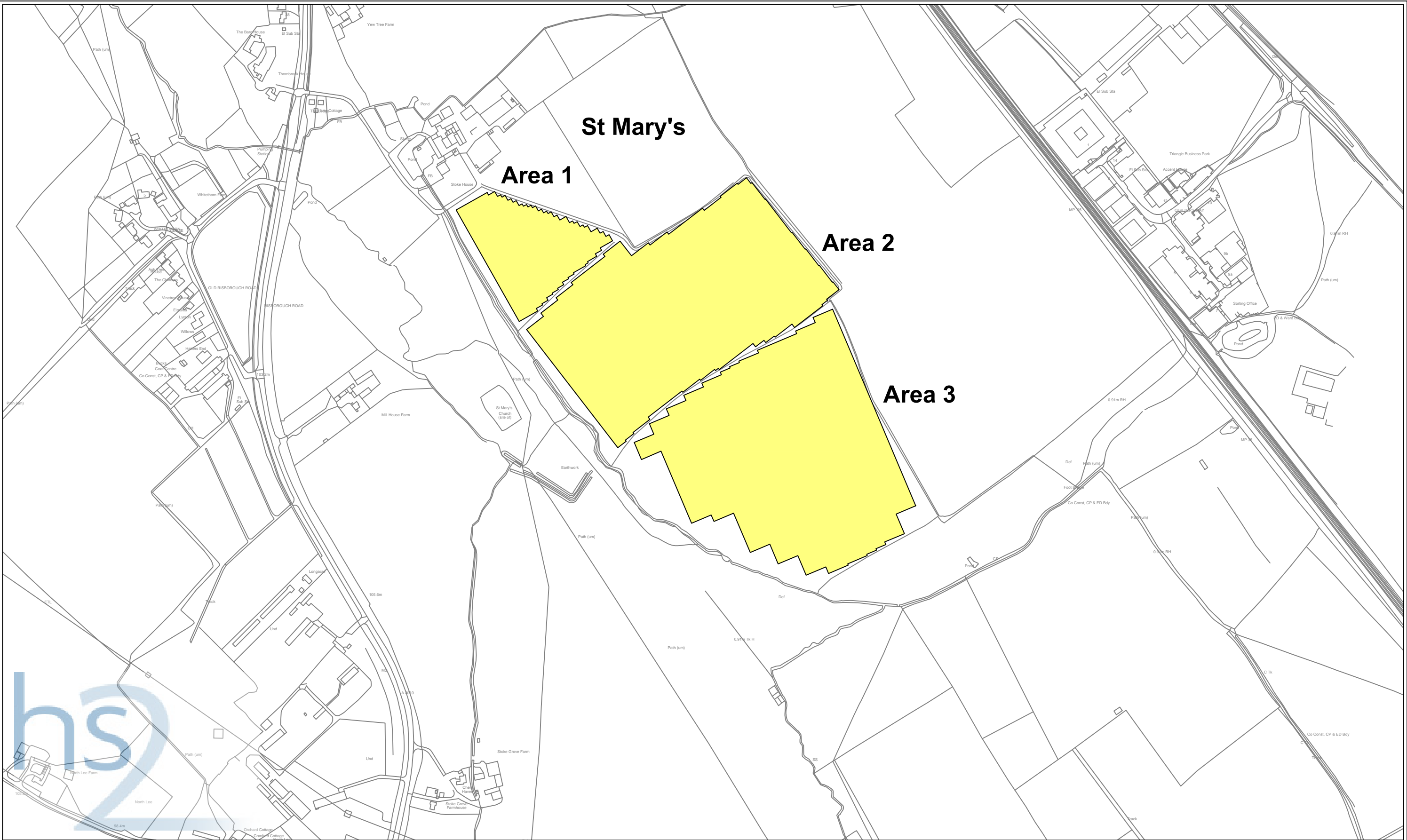
**Title:** IB0AA(2) Site Location Diagram

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CH-004-11.13





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0 200  
metres

1:5000 @ A3



Area of Detailed Magnetometer Survey

**Project:** G1317/2 HS2: C252 Country South  
CFA11 IB0AA(2) St. Mary's

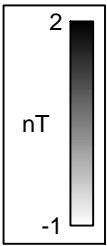
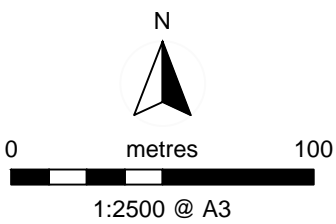
**Title:** IB0AA(2) Location of Survey Areas

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**CH-004-11.14**





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CFA11 IB0AA(2) St Mary's

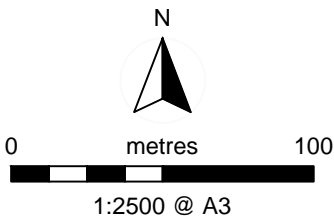
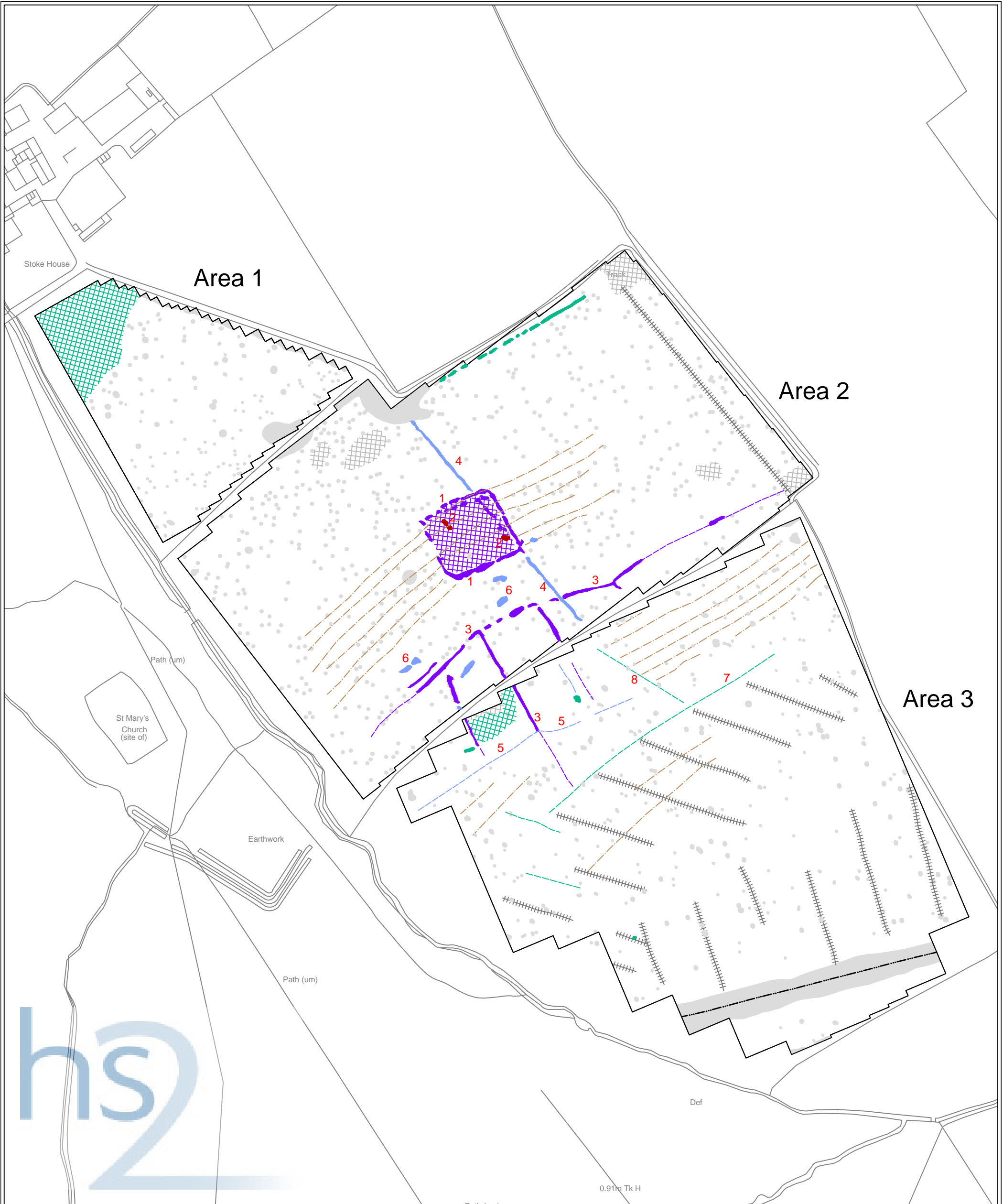
Title: IB0AA(2) Magnetometer Survey -  
Greyscale Plots

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Drawn by: GSA

CH-004-11.15





- |  |   |  |                                   |
|--|---|--|-----------------------------------|
|  | Archaeology<br>(discrete anomaly / zone / trend)      |  | Agriculture -<br>Ridge and Furrow |
|  | Possible Archaeology<br>(discrete anomaly / trend)    |  | Pipe / Drain                      |
|  | Uncertain Origin<br>(discrete anomaly / zone / trend) |  | Ferrous / Ferrous Zone            |
|  | Industrial - Burnt / fired                            |  |                                   |

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Project: G1317/2 HS2: C252 Country South  
CFA11 IB0AA(2) St Mary's

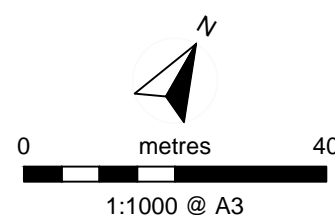
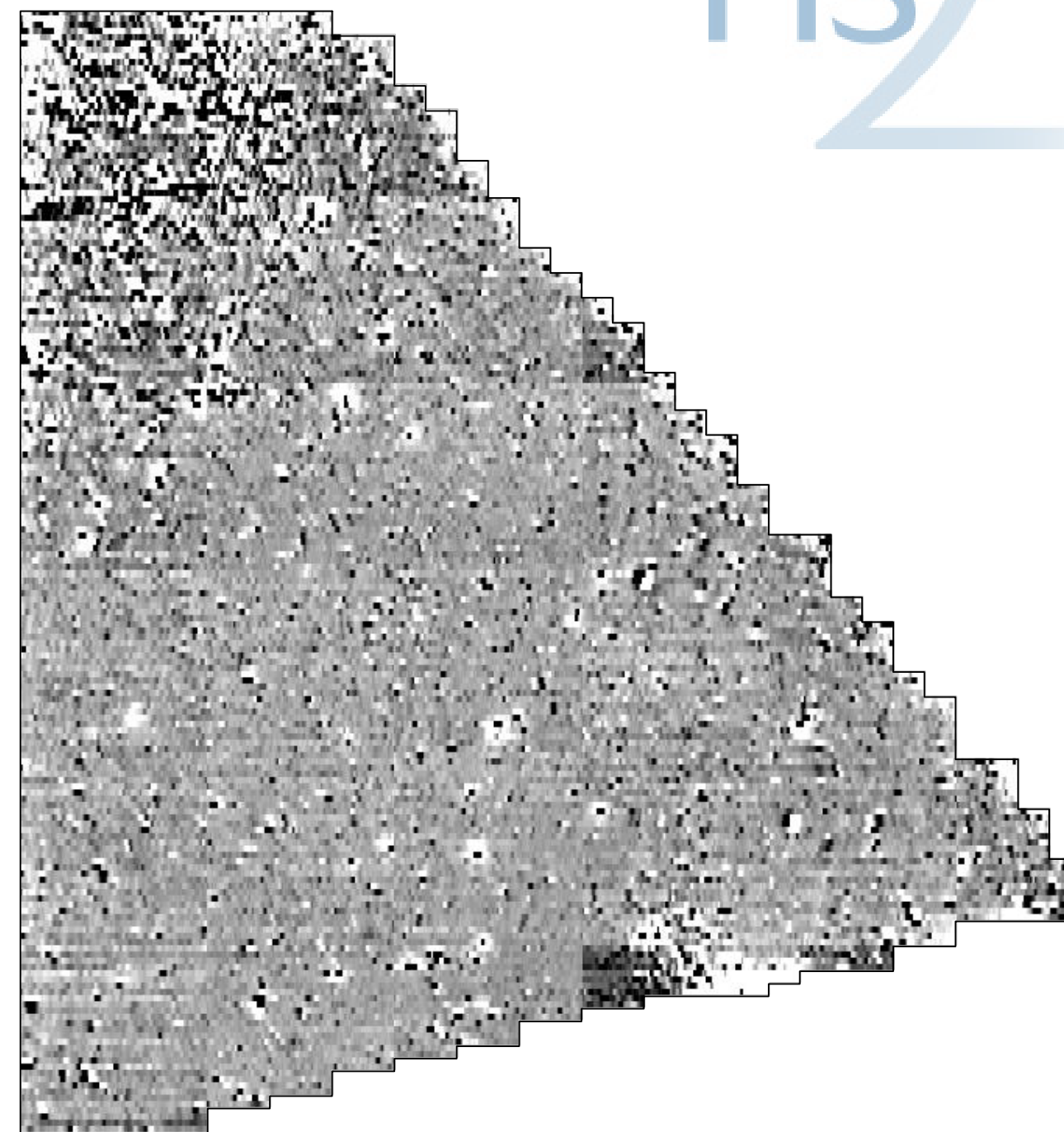
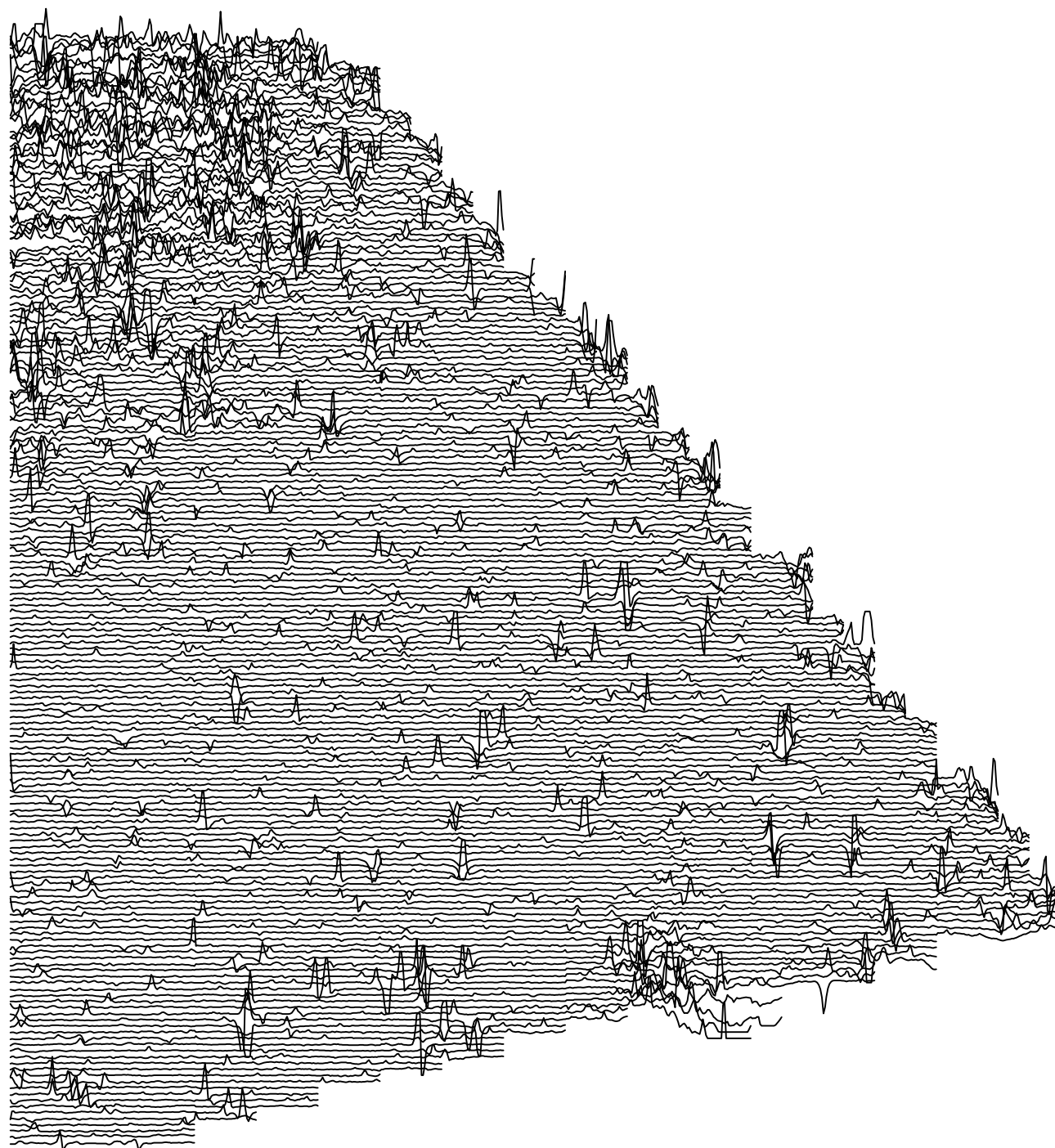
Title: IB0AA(2) Magnetometer Survey  
Interpretation

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Drawn by: GSA

CH-004-11.16





15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



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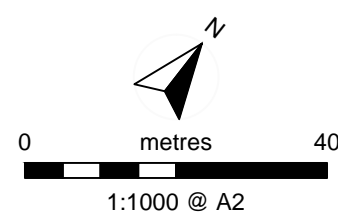
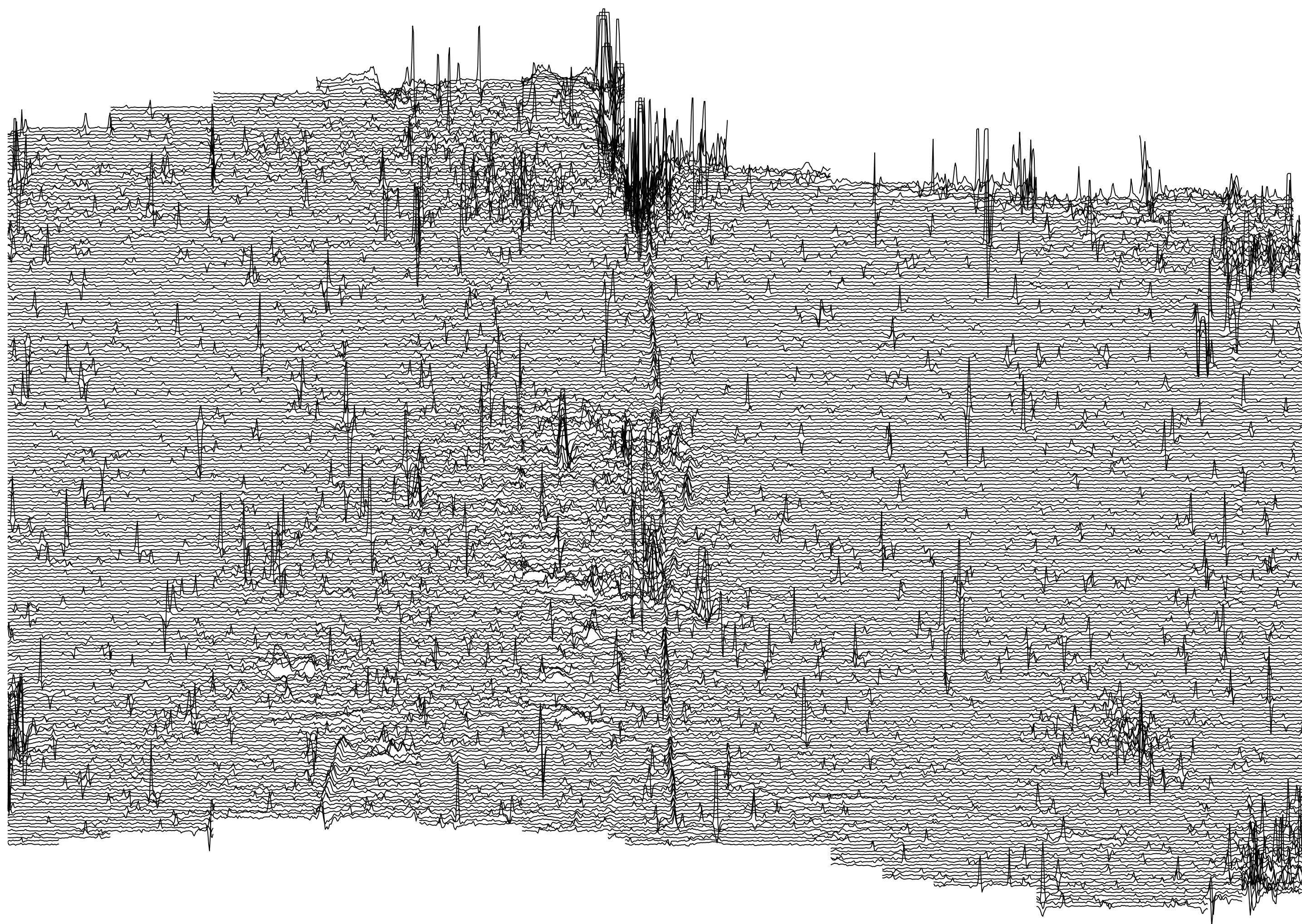
**Project:** G1317/2 HS2: C252 Country South  
CFA11 IB0AA(2) St. Mary's

**Title:** Magnetic Data - Area 1:  
XY Trace Plot & Greyscale Plot

Drawn by: JMT

CH-004-11.17





15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-50nT

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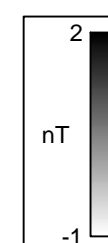
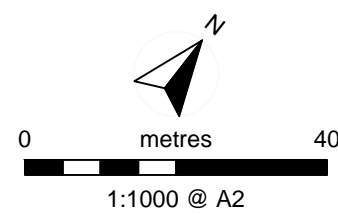
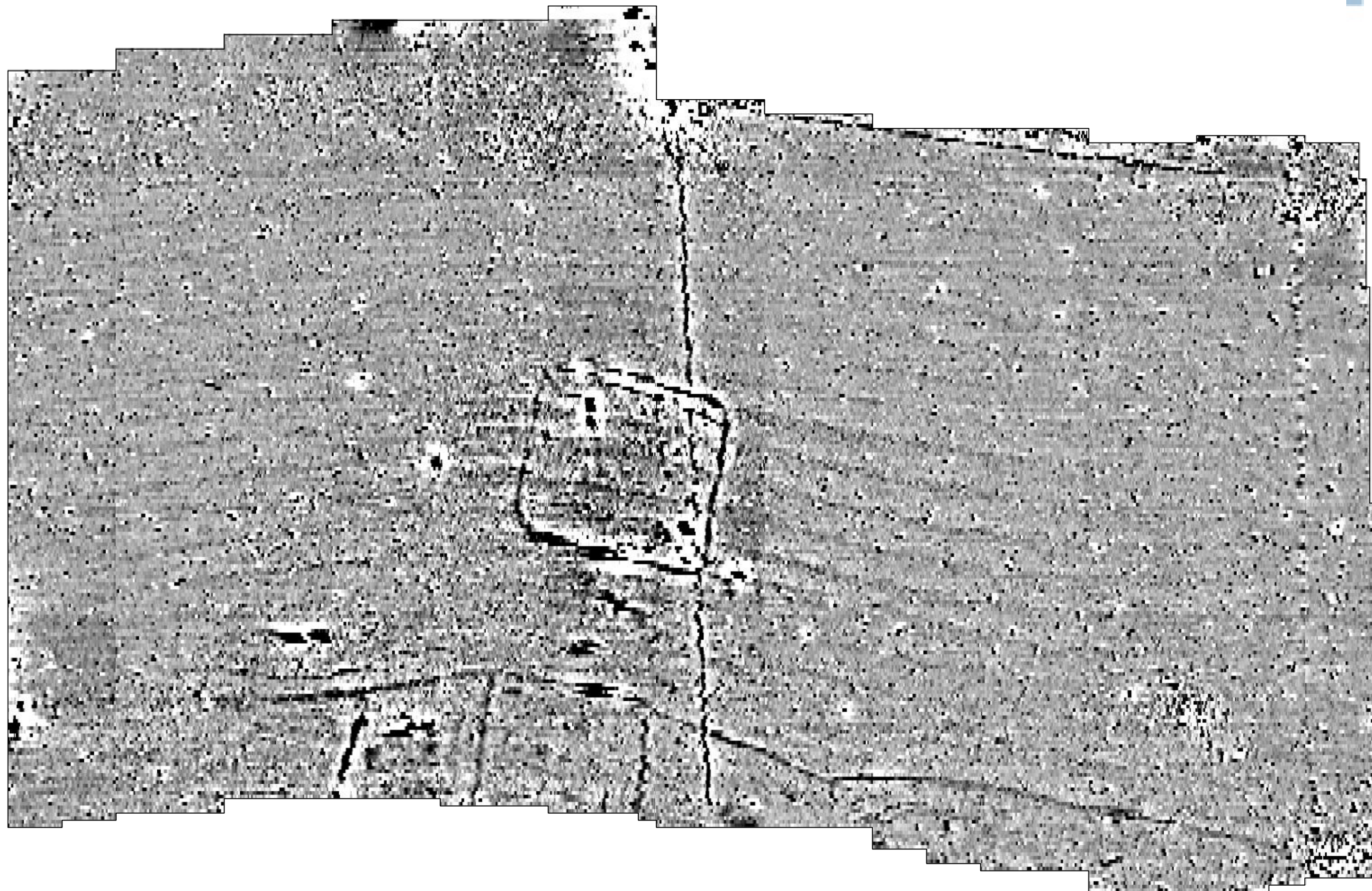
**Project:** G1317/2 HS2: C252 Country South  
CFA11 IB0AA(2) St Mary's


**Title:** Magnetic Data - Area 2:  
XY Trace Plot

Drawn by: JMT

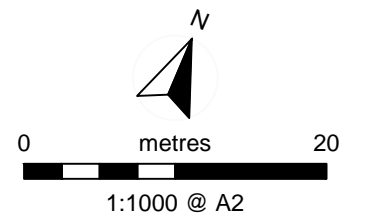
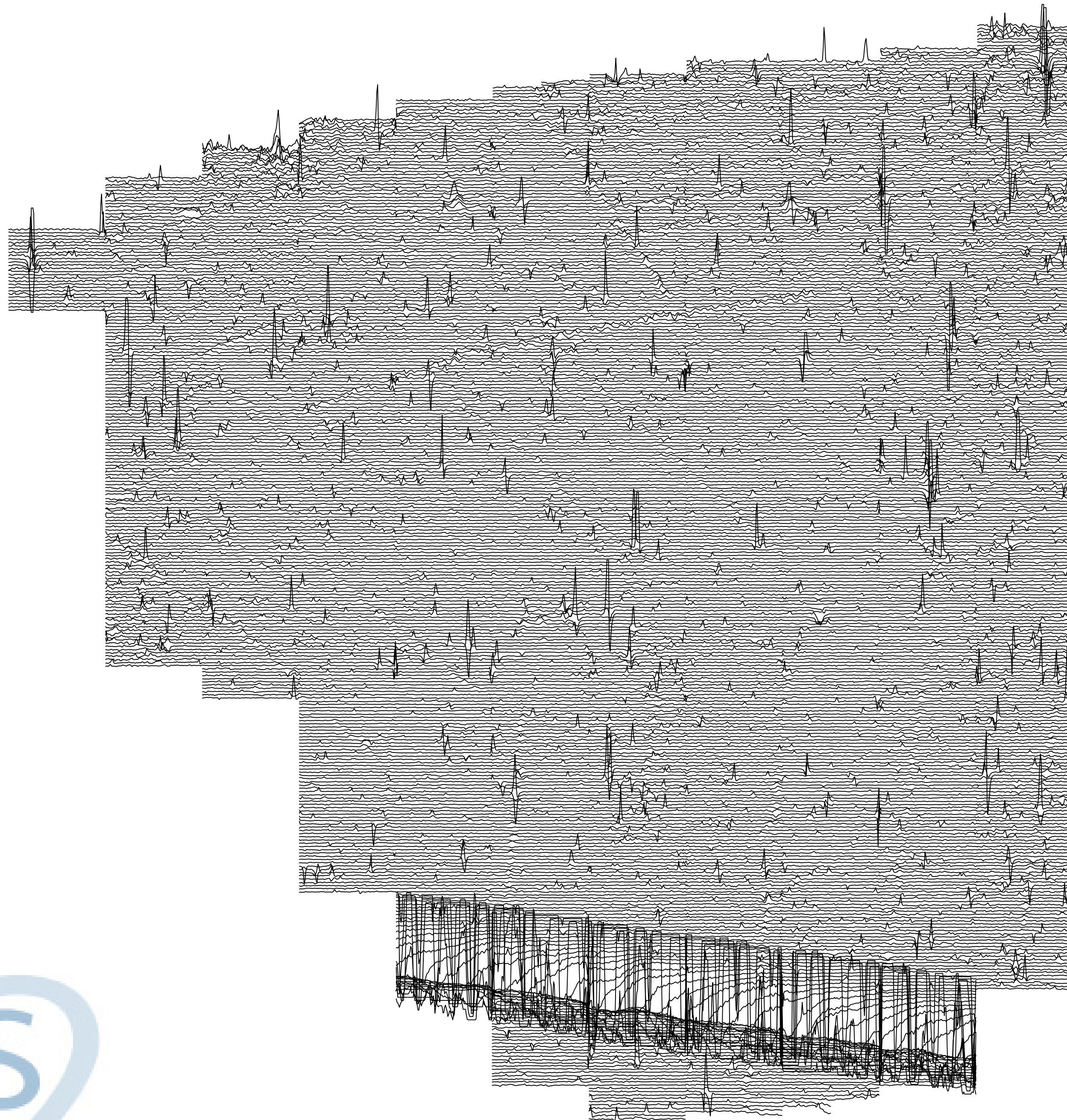
CH-004-11.18





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<b>Project:</b> G1317/2 HS2: C252 Country South CFA11 IB0AA(2) St Mary's		
<b>Title:</b> Magnetic Data - Area 2: Greyscale Plot		
Drawn by: JMT		<b>CH-004-11.19</b>





15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-50nT

hs2

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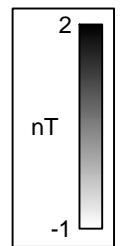
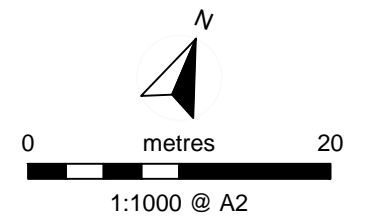
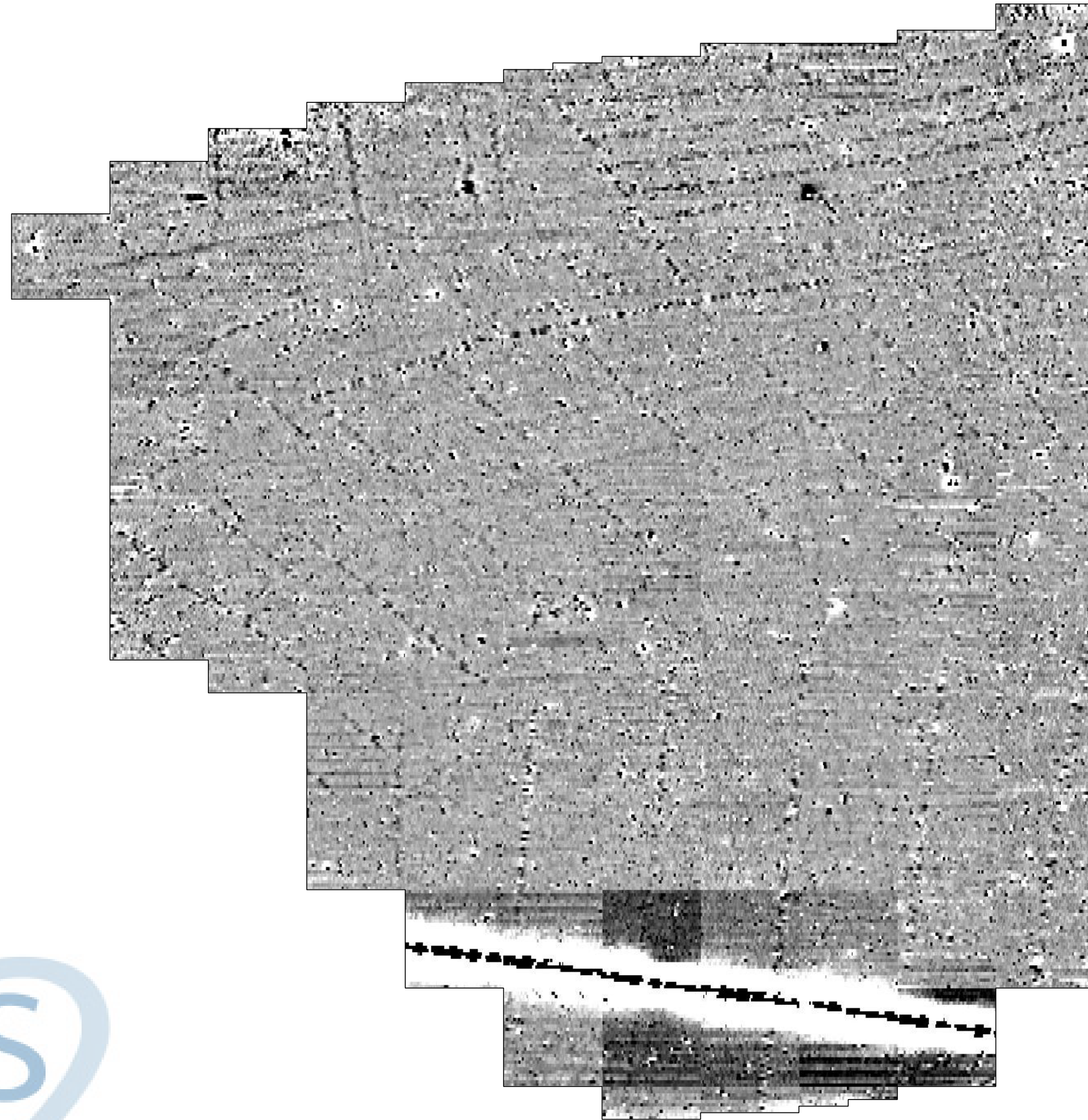
**Project:** G1317/2 HS2: C252 Country South  
CFA11 IB0AA(2) St Mary's

**Title:** Magnetic Data - Area 3:  
XY Trace Plot


Drawn by: JMT

CH-004-11.20

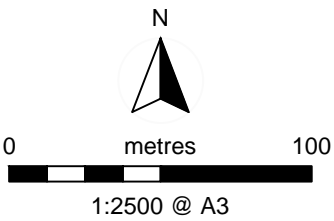
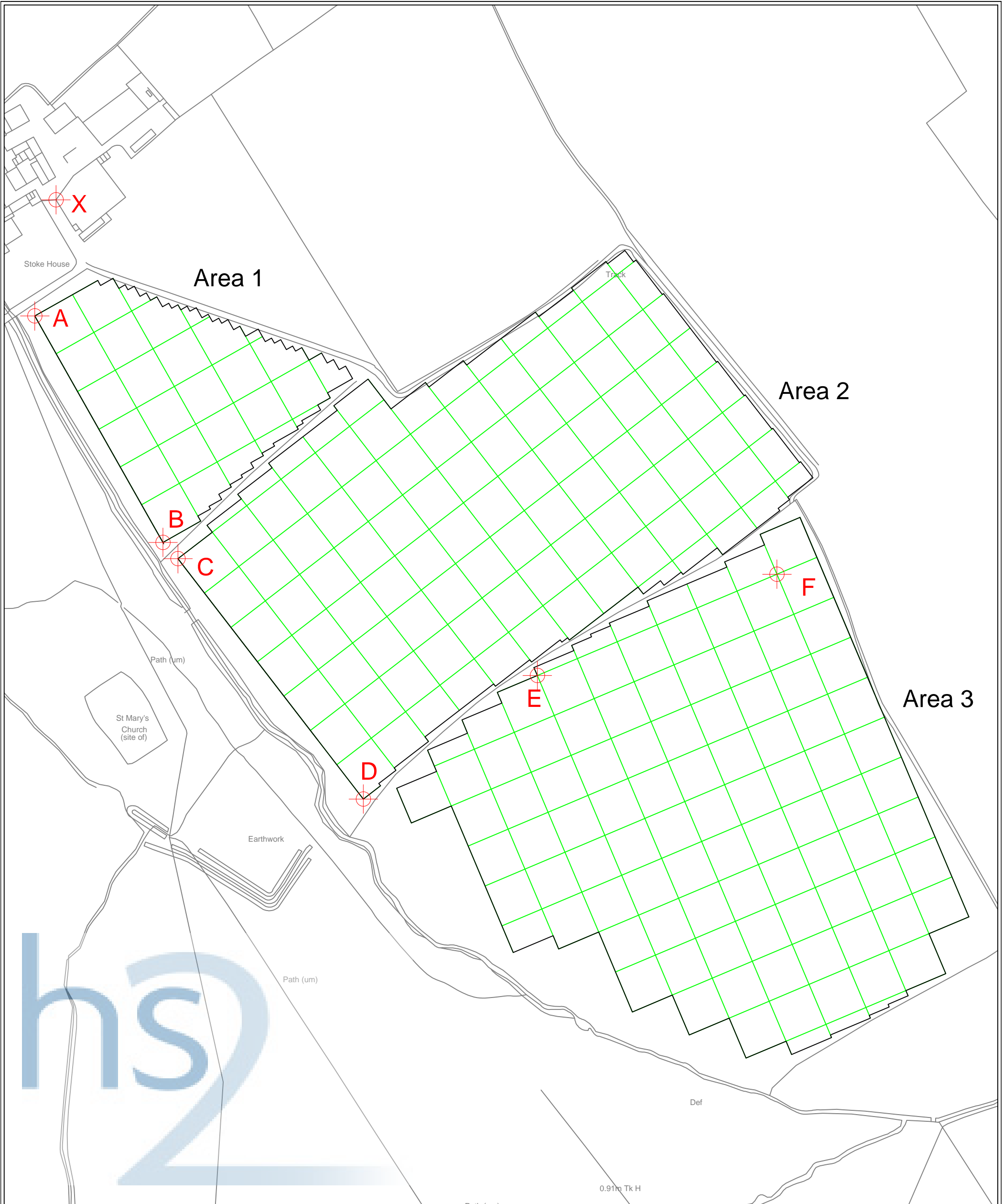





hs2

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<b>Project:</b> G1317/2 HS2: C252 Country South CFA11 IB0AA(2) St Mary's		
<b>Title:</b> Magnetic Data - Area 3: GreyscalePlot		
Drawn by: JMT		<b>CH-004-11.21</b>






 Survey areas showing 30m grid subdivisions

Point	Easting	Northing	Description
A	483764.070	209696.832	Grid node Area 1
B	483852.758	209540.150	Grid node Area 1
C	483863.102	209528.929	Grid node Area 2
D	483991.338	209362.696	Grid node Area 2
E	484111.757	209448.108	Grid node Area 3
F	484277.487	209518.179	Grid node Area 3
X	483778.582	209776.850	Fence corner

The above co-ordinates are uncorrected RTK measurements. If reconstructing the grid using GPS, recorded map detail point X must be used as a calibration point.

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Project:

G1317/2 HS2: C252 Country South  
CFA11 IB0AA(2) St Mary's

Title:

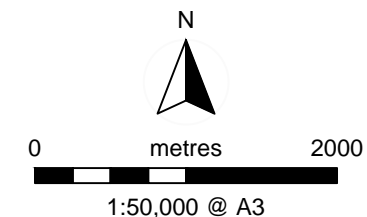
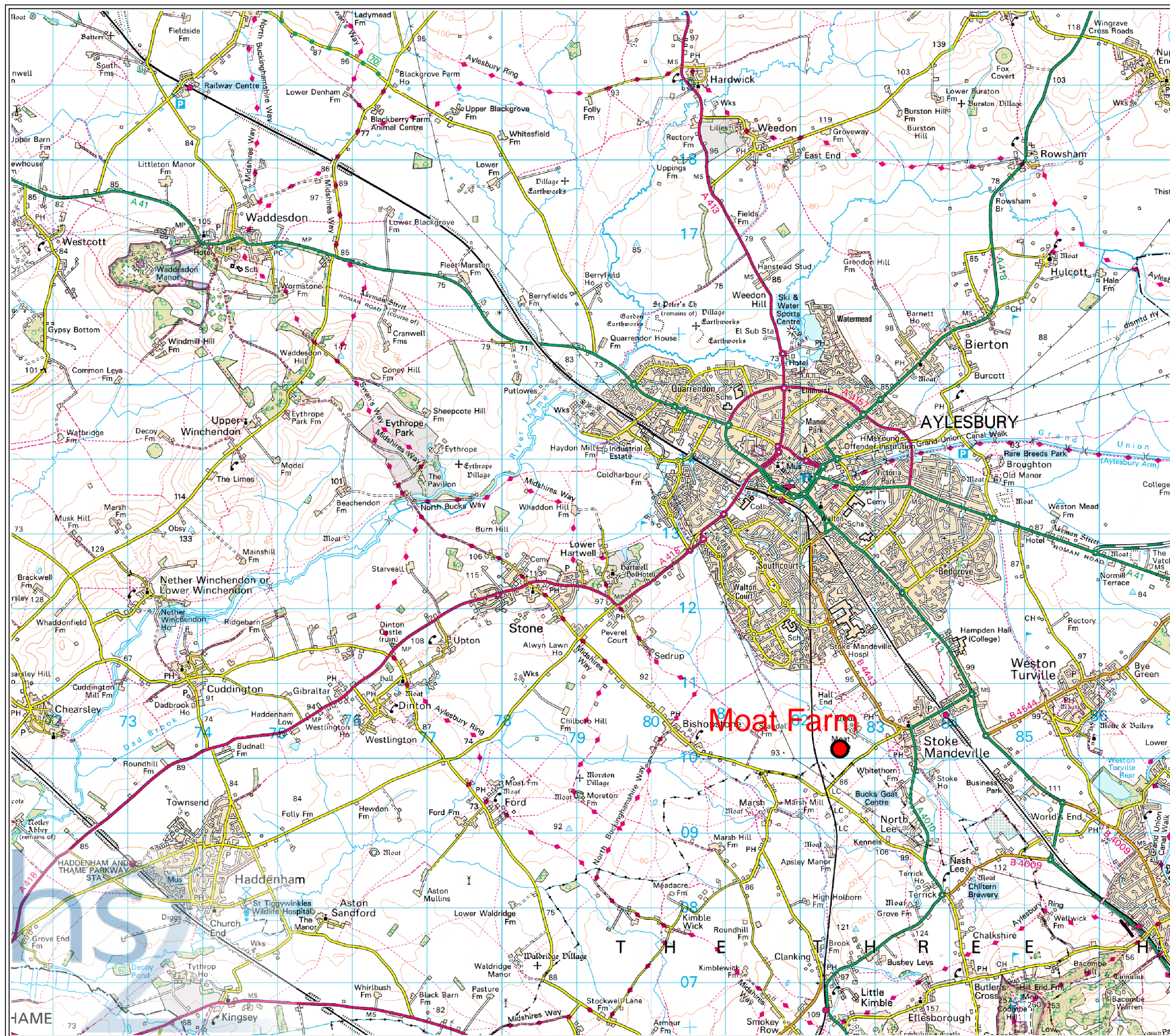
Tie - In Diagram

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CH-004-11.22





 Site Locations

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Project: G1317/ 4 HS2: C252 Country South  
CFA11 IB0AB Moat Farm

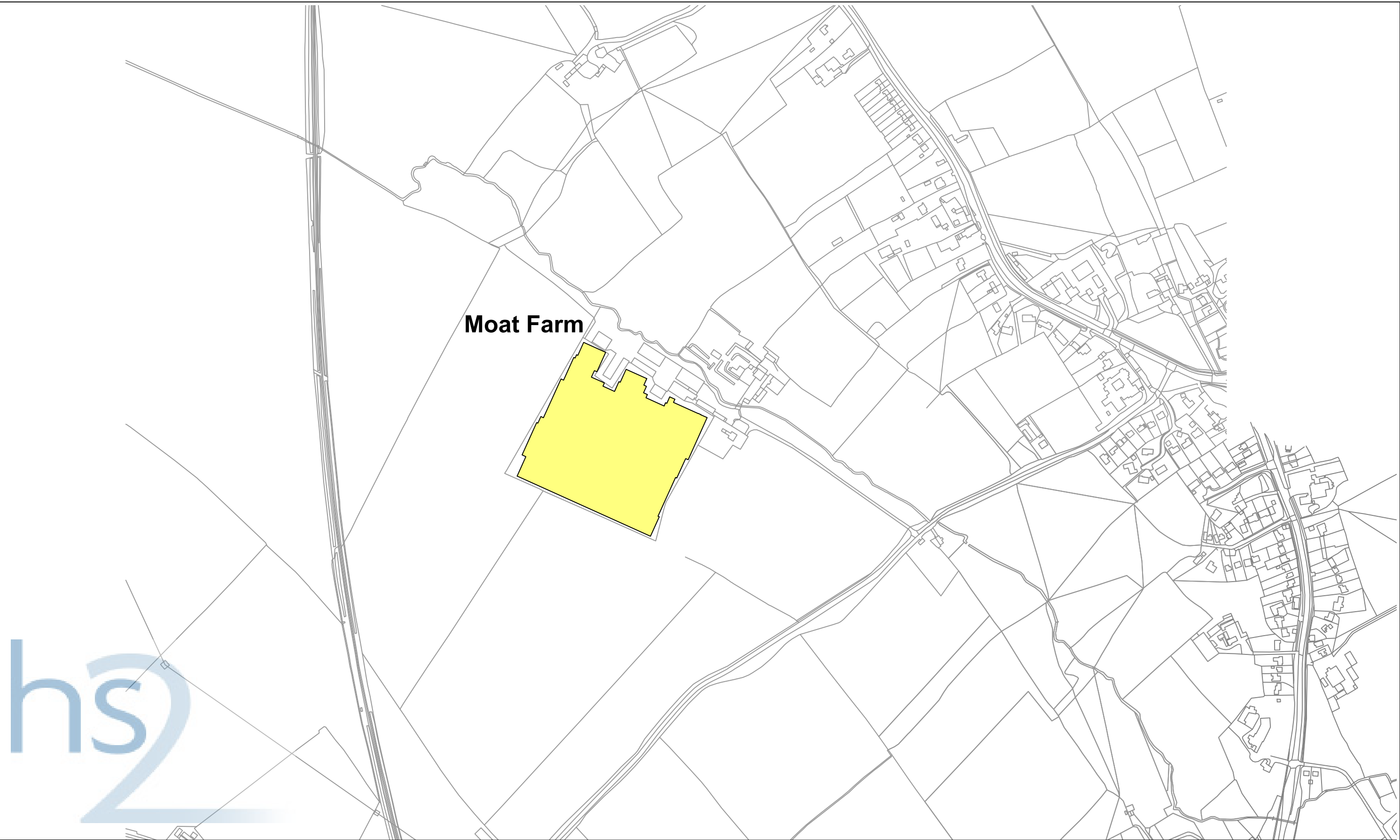
Title: IB0AB Site Location Diagram

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CH-004-11.23






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N



0 200  
metres

1:5000 @ A3

 Area of Detailed Magnetometer Survey

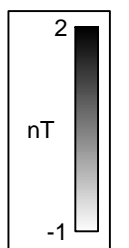
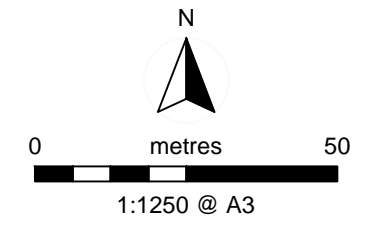
**Project:** G1317/4 HS2: C252 Country South  
CFA11 IB0AB Moat Farm


**Title:** IB0AB Location of Survey Area

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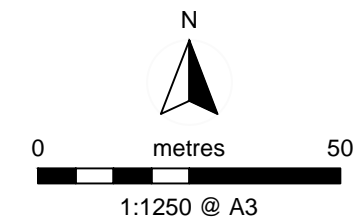
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
**CH-004-11.24**




<div>GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW +44 (0)1274 835016</div> <div></div>	
<b>Project:</b>	G1317/4 HS2: C252 Country South CFA11 IB0AB Moat Farm
<b>Title:</b>	IB0AB Magnetometer Survey Greyscale Plot
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Drawn by: JMT	<b>CH-004-11.25</b>

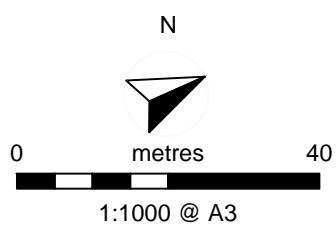
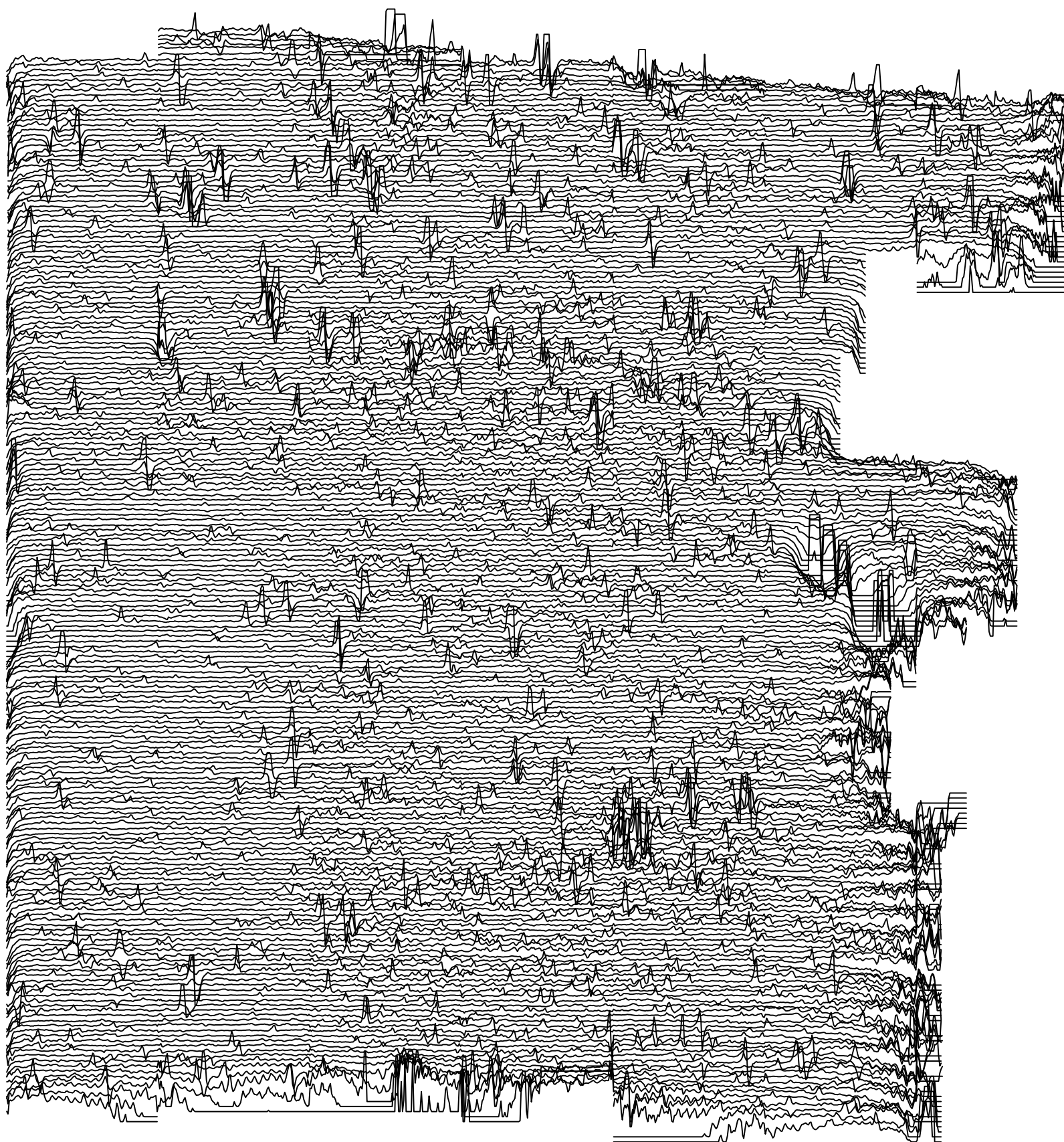




-  Agricultural - Ridge and Furrow
-  Ferrous - Zone
-  Ferrous - Discrete Anomaly



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<p><b>Project:</b> G1317/4 HS2: C252 Country South CFA11 IB0AB Moat Farm</p>		
<p><b>Title:</b> IB0AB Magnetometer Survey Interpretation</p>		
<p><small>Based on the Ordnance Survey Map provided by the client. Reproduced with the permission of the Controller of HMSO © Crown Copyright (AL100018665)</small></p>		
<p>Drawn by: JMT</p>		<p><b>CH-004-11.26</b></p>



15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT

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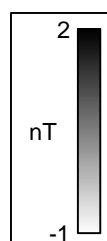
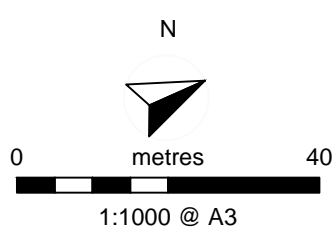
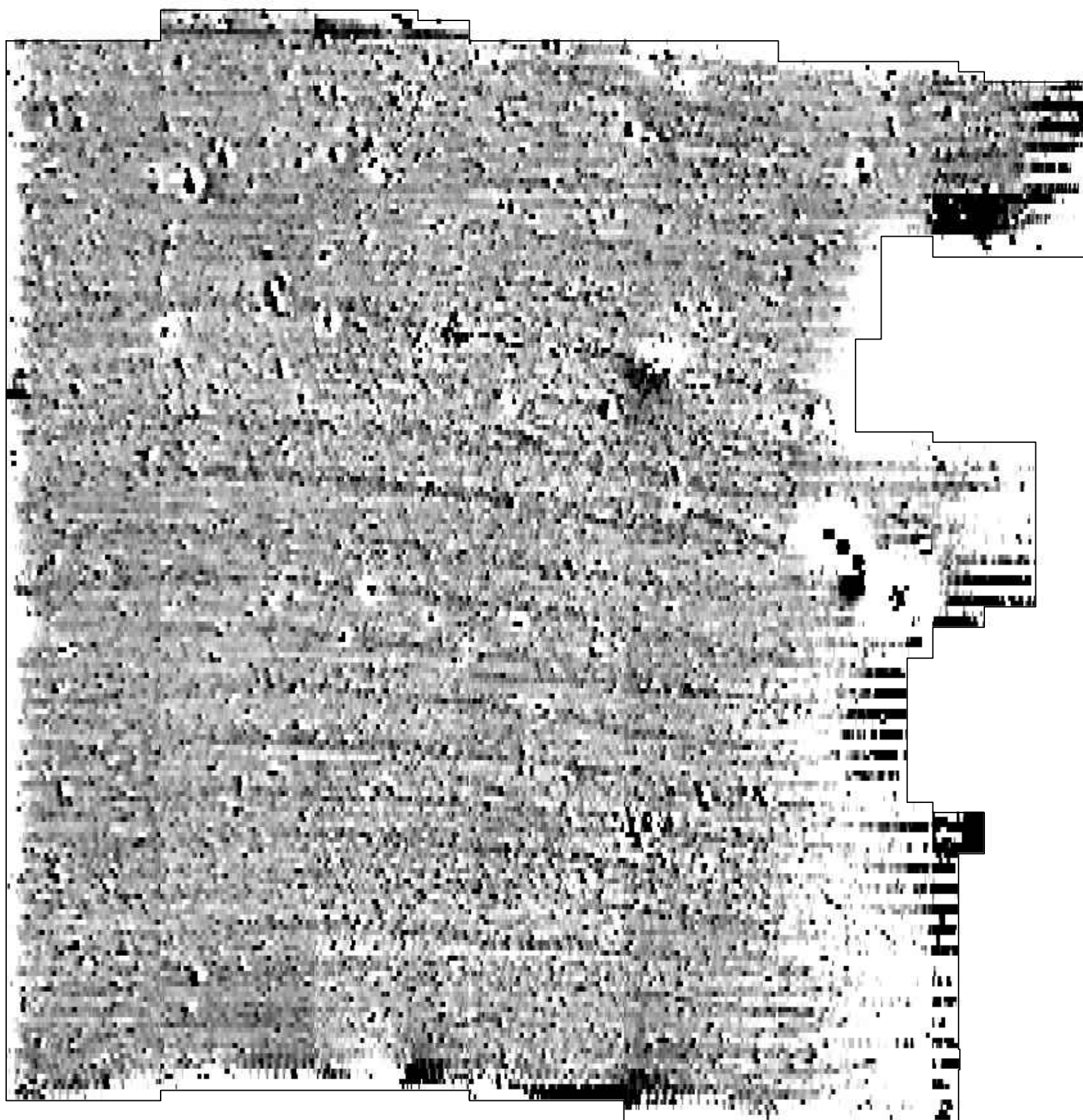
**Project:** G1317/4 HS2: C252 Country South  
CFA11 IB0AB Moat Farm

**Title:** IB0AB Magnetic Data: XY Trace Plot

Drawn by: ELWood

CH-004-11.27





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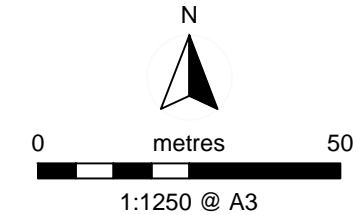




**Project:** G1317/4 HS2: C252 Country South  
CFA11 IB0AB Moat Farm

**Title:** IB0AB Magnetic Data: Greyscale Plot

Drawn by: ELWood

CH-004-11.28




-  Selected GPS Point
-  30m Grid Division

Point	Eastings	Northings	Notes
1	482449.899	210267.049	Grid point
2	482559.220	210217.671	Grid point
3	482715.354	210344.644	Grid point
A	482745.457	210347.126	Building corner
B	482643.756	210174.916	Field Corner
C	482432.624	210271.080	Field Corner

The above GPS points are raw RTK co-ordinates. If re-establishing the grid or setting out trenches, please use points A-C for reference.

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**Project:** G1317/4 HS2: C252 Country South  
CFA11 IB0AB Moat Farm

**Title:** IB0AB Tie-in Information

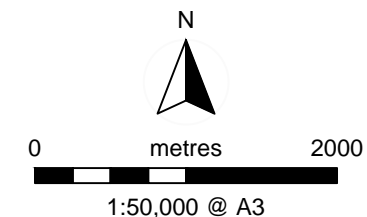
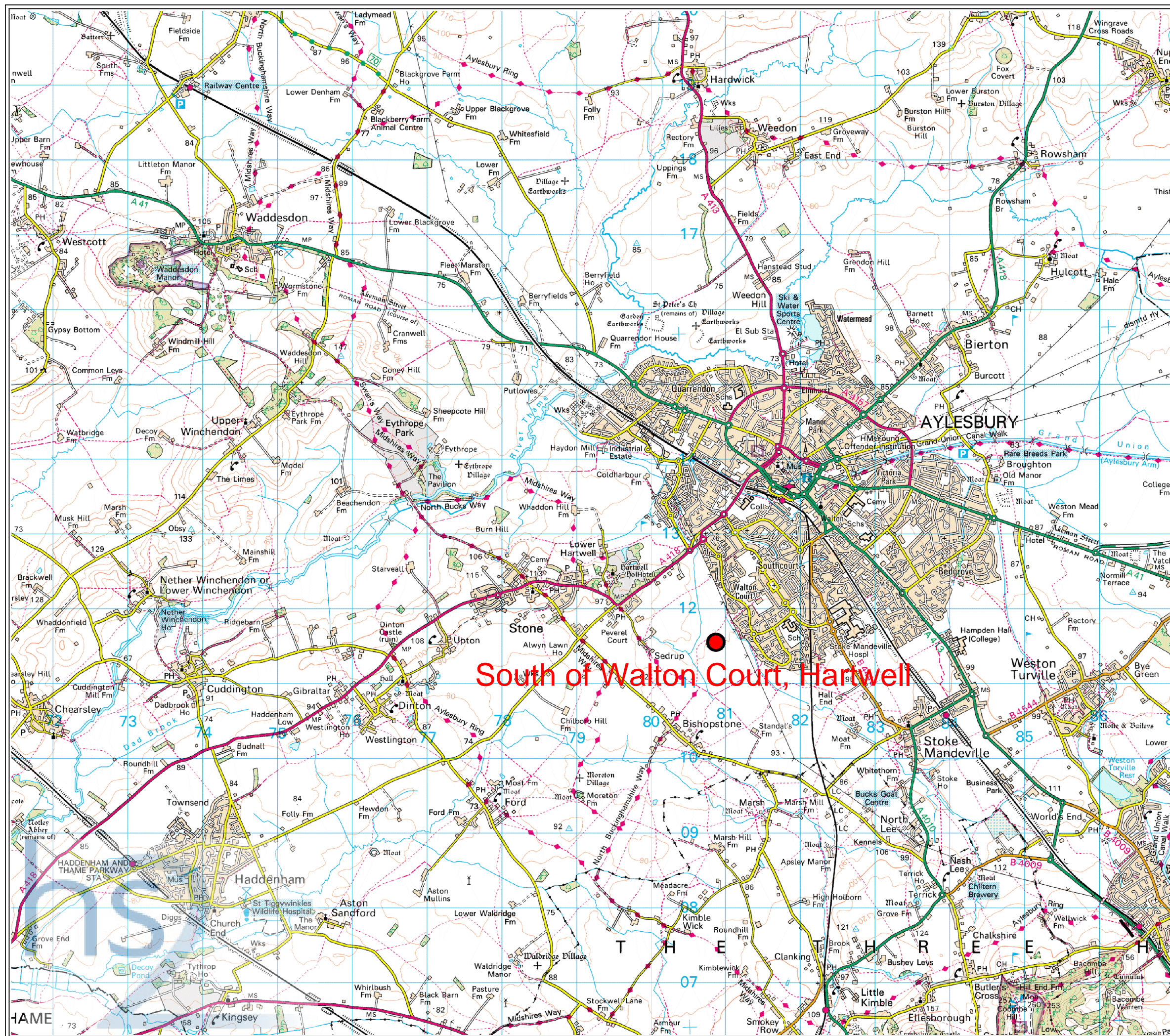
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Drawn by: ELWood

CH-004-11.29







 Site Locations

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Project: G1317/9 HS2: C252 Country South  
CFA11 IB0AC South of Walton Court, Hartwell

Title: IB0AC Site Location Diagram

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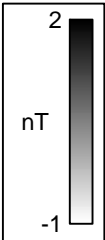
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CH-004-11.30

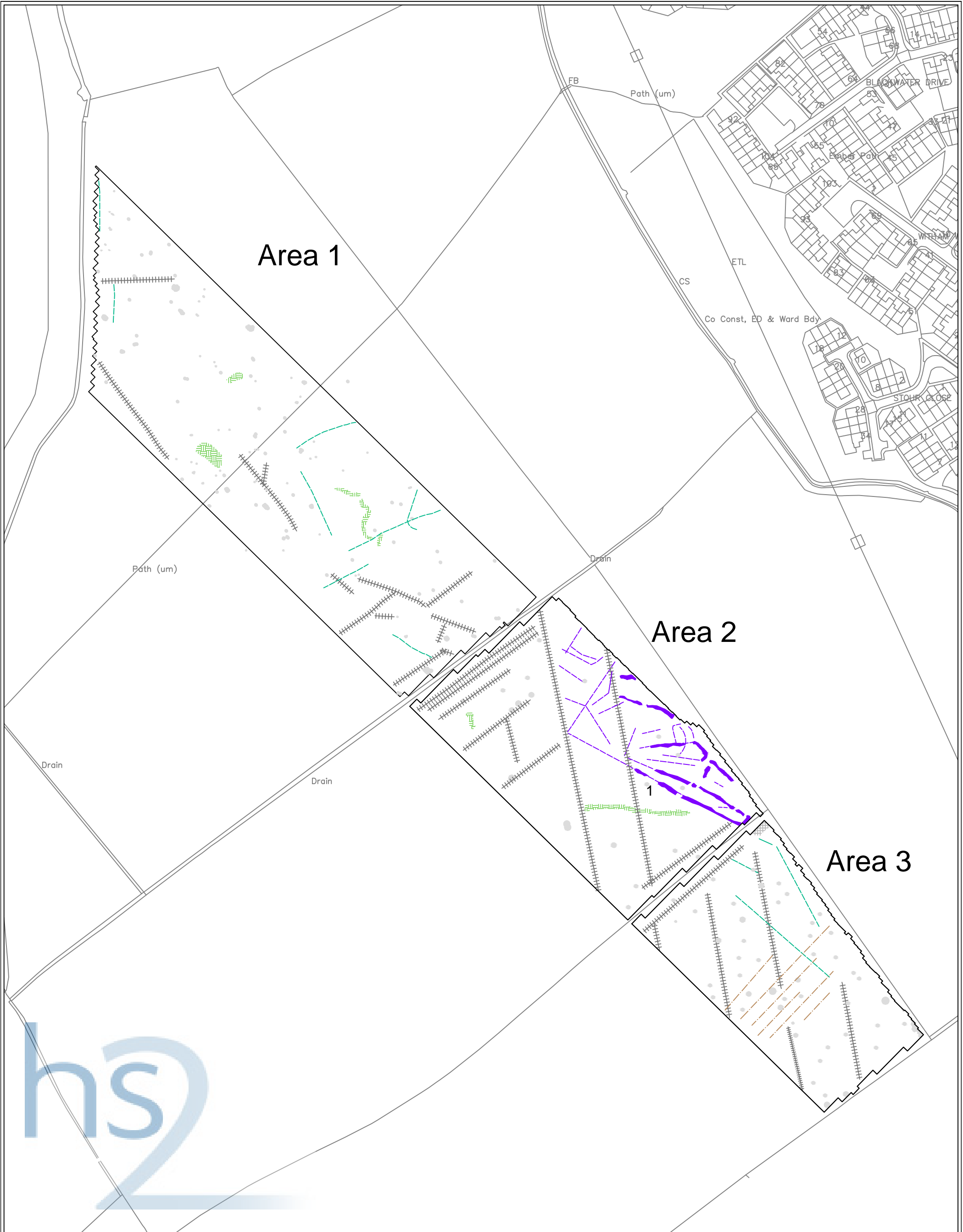






 GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton, Bradford, BD13 3HW +44 (0)1274 835016 	 0      metres      100 1:2500 @ A3		<b>Project:</b> G1317/9 HS2: C252 Country South CFA11 IB0AC South of Walton Court, Hartwell	
			<b>Title:</b> IB0AC Magnetometer Survey - Greyscale Plot	
			Based on the Ordnance Survey Map provided by the client. Reproduced with the permission of the Controller of HMSO © Crown Copyright (AL100018665)	
			Drawn by: ELWood	<b>CH-004-11.32</b>

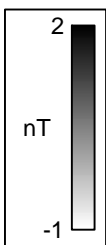
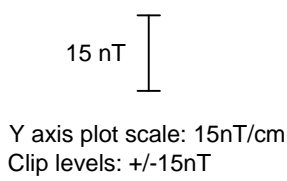
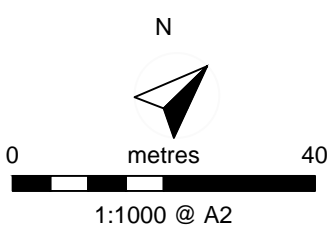
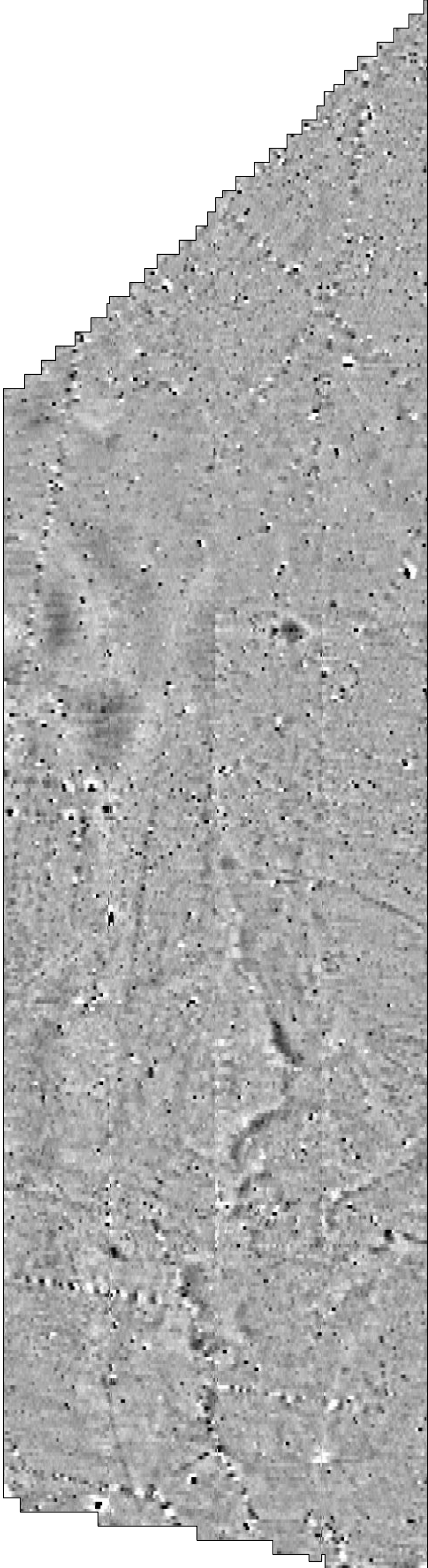
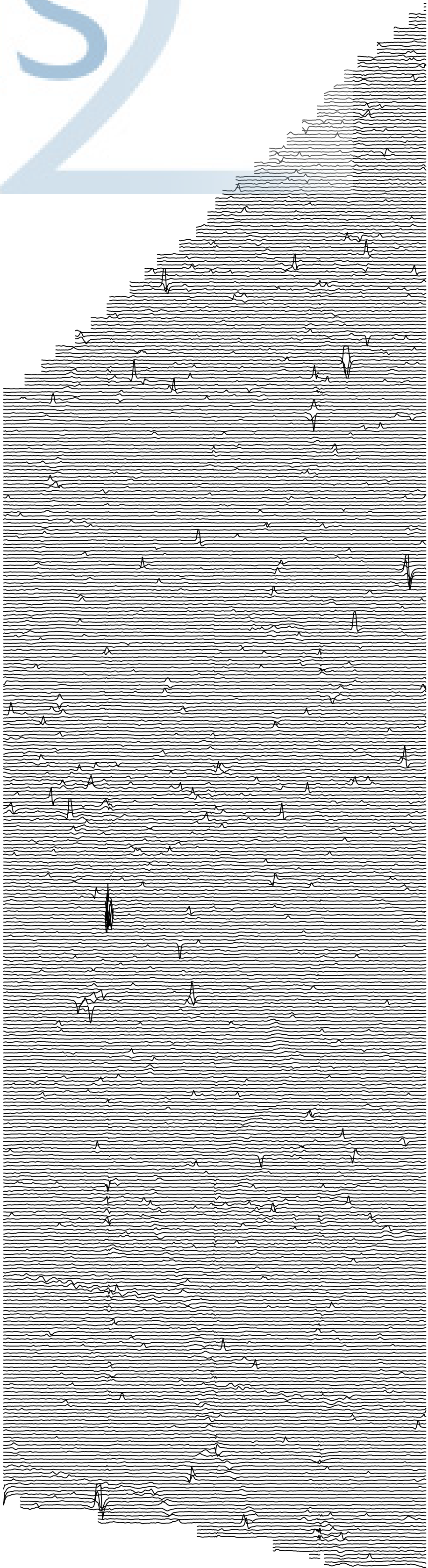




 GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton, Bradford, BD13 3HW +44 (0)1274 835016 	 0      metres      100 1:2500 @ A3	Archaeology (discrete anomaly / trend)	Agricultural (Ridge and Furrow)
		Uncertain Origin (trend)	Agricultural (Field Drains)
		Natural (zone)	Ferrous (discrete anomaly / zone)
		<b>Project:</b> G1317/9 HS2: C252 Country South CFA11 IB0AC South of Walton Court, Hartwell	
<b>Title:</b> IB0AC Magnetometer Survey - Interpretation Plot		Based on the Ordnance Survey Map provided by the client. Reproduced with the permission of the Controller of HMSO © Crown Copyright (AL100018665)	
Drawn by: ELWood		CH-004-11.33	

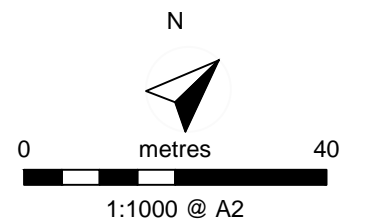
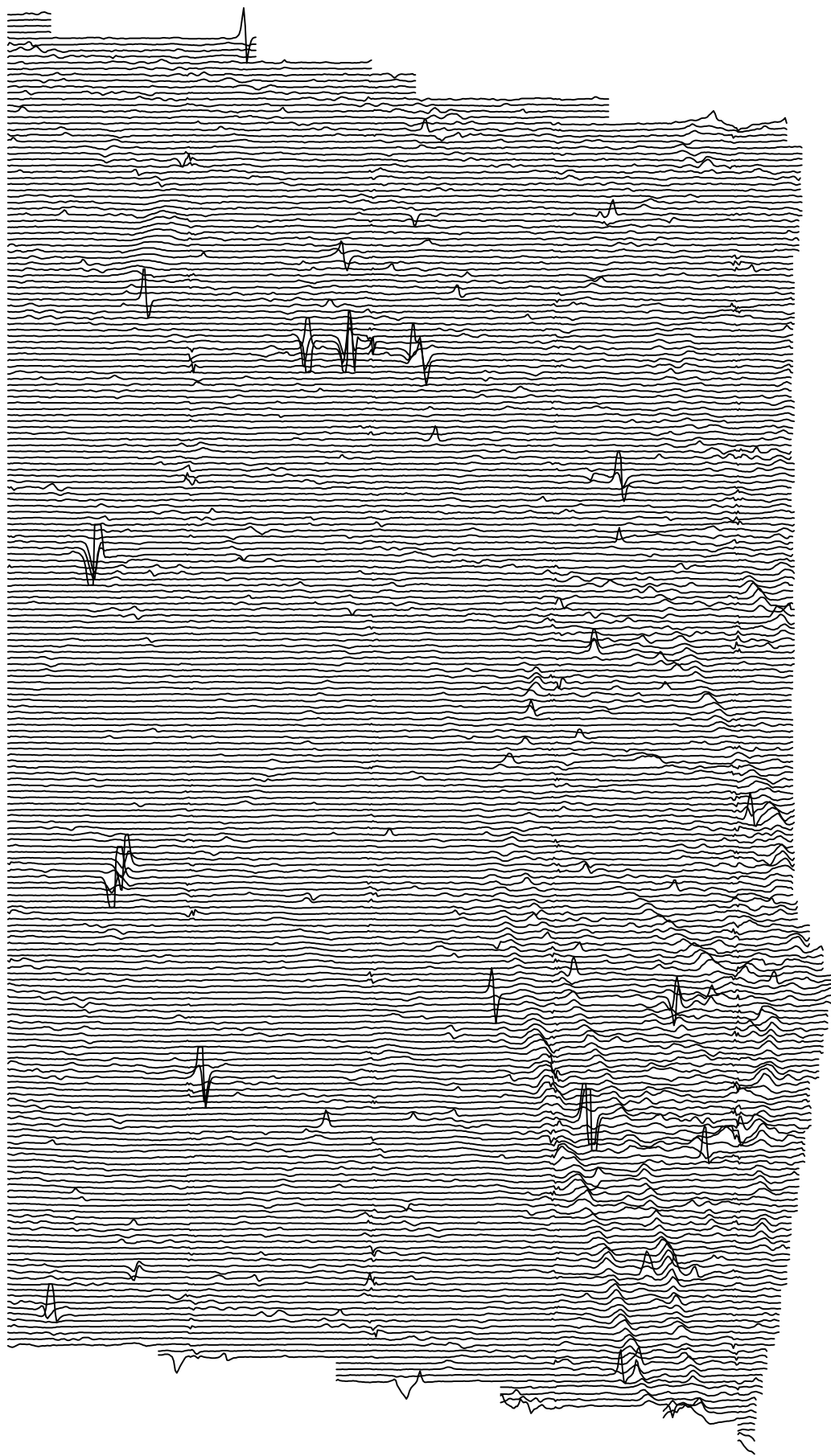


hs2



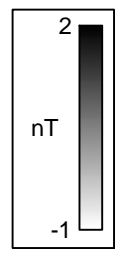
<div>GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW +44 (0)1274 835016</div> <div><b>GSB</b> PROSPECTION Ltd</div>	
<b>Project:</b> G1317/9 HS2: C252 Country South CFA11 IB0AC South of Walton Court, Hartwell	
<b>Title:</b> Magnetic Data - Area 1: XY Trace Plot & Greyscale Plot	
Drawn by: ELWood	<b>CH-004-11.34</b>






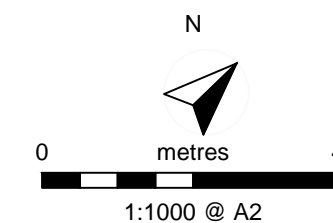
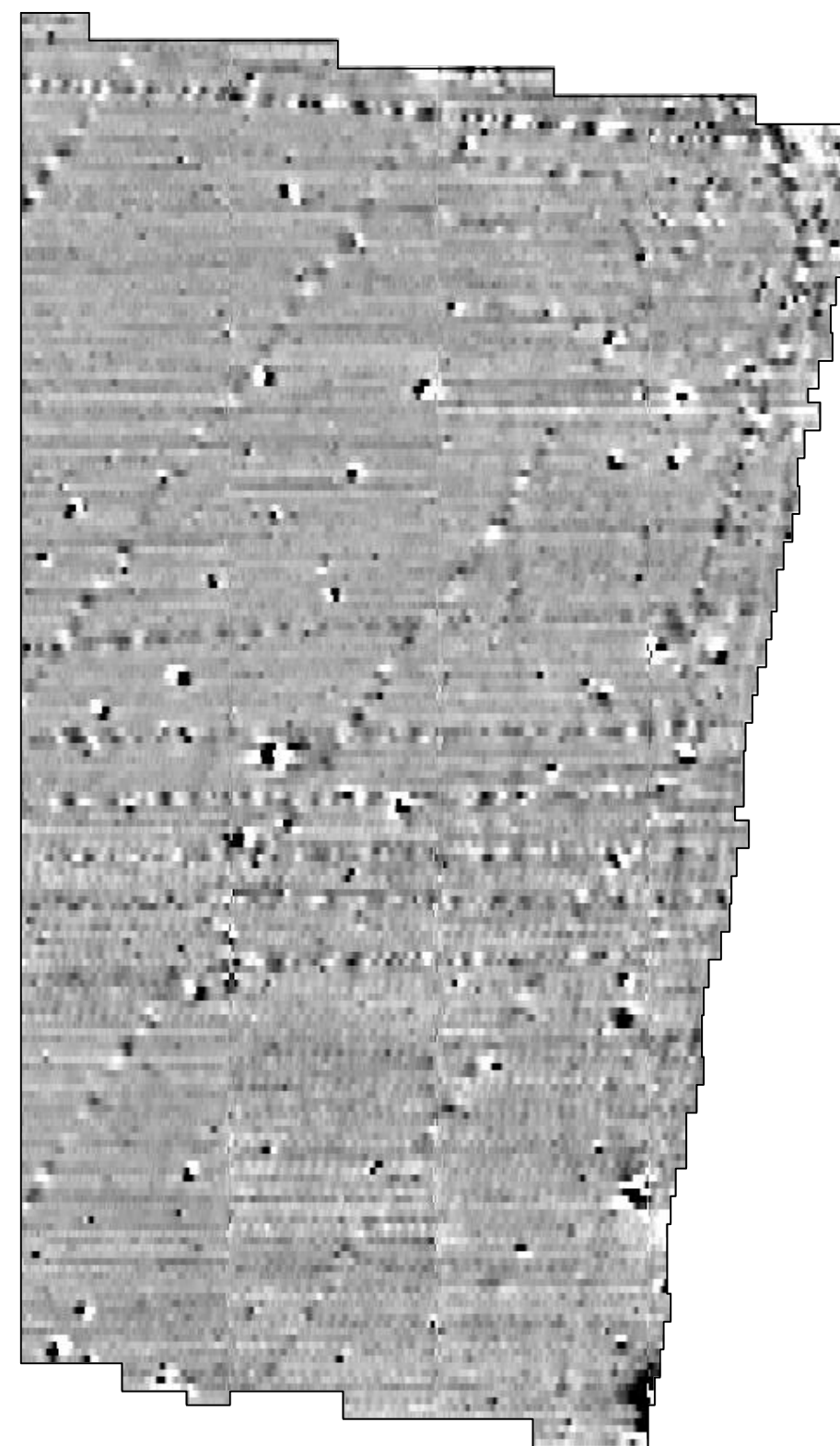
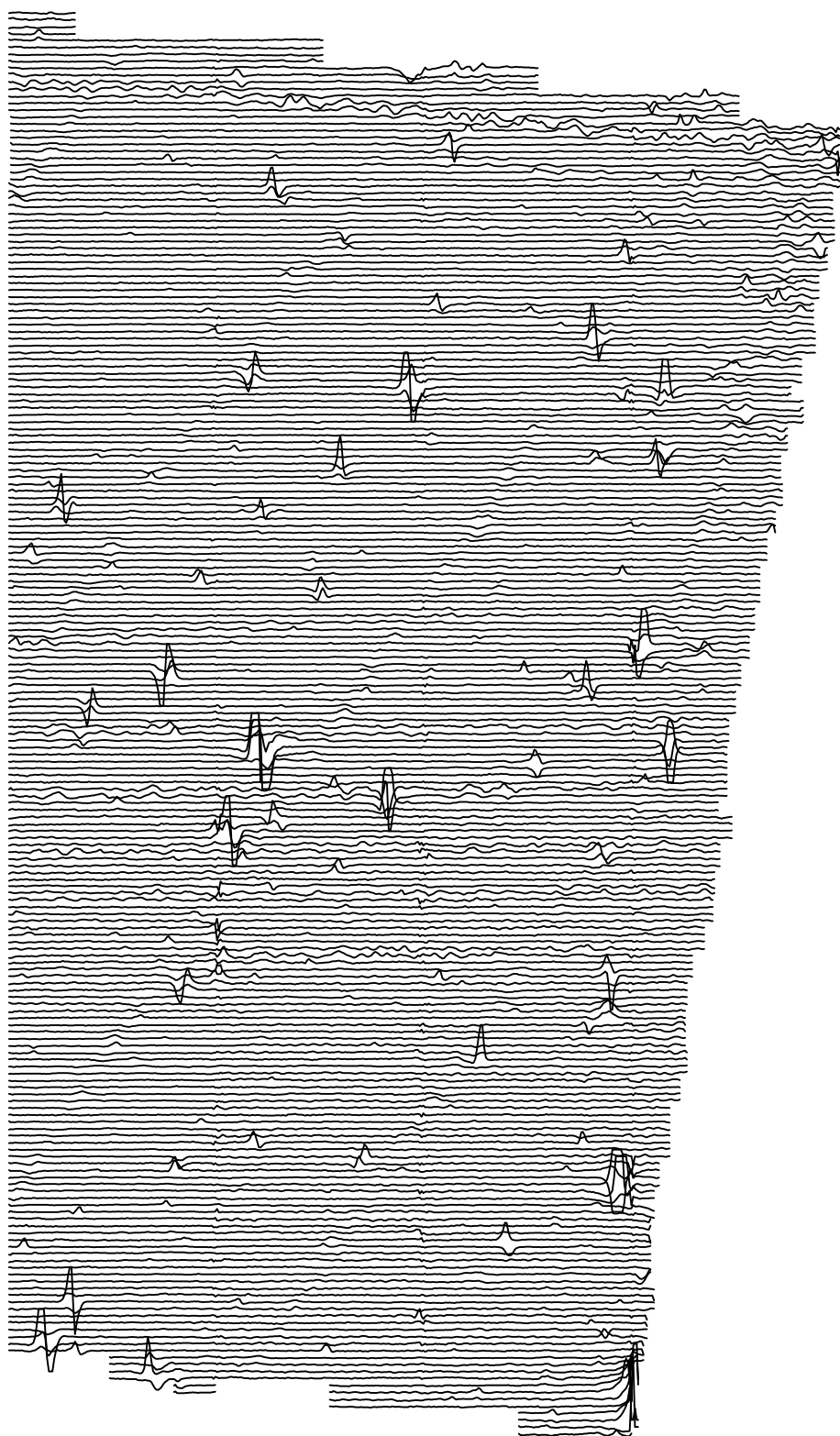
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Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



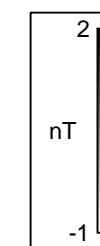
<div>GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW +44 (0)1274 835016</div> <div></div>	
<b>Project:</b> G1317/9 HS2: C252 Country South CFA11 IB0AC South of Walton Court, Hartwell	
<b>Title:</b> Magnetic Data - Area 2: XY Trace Plot & Greyscale Plot	
Drawn by: ELWood	<b>CH-004-11.35</b>





15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



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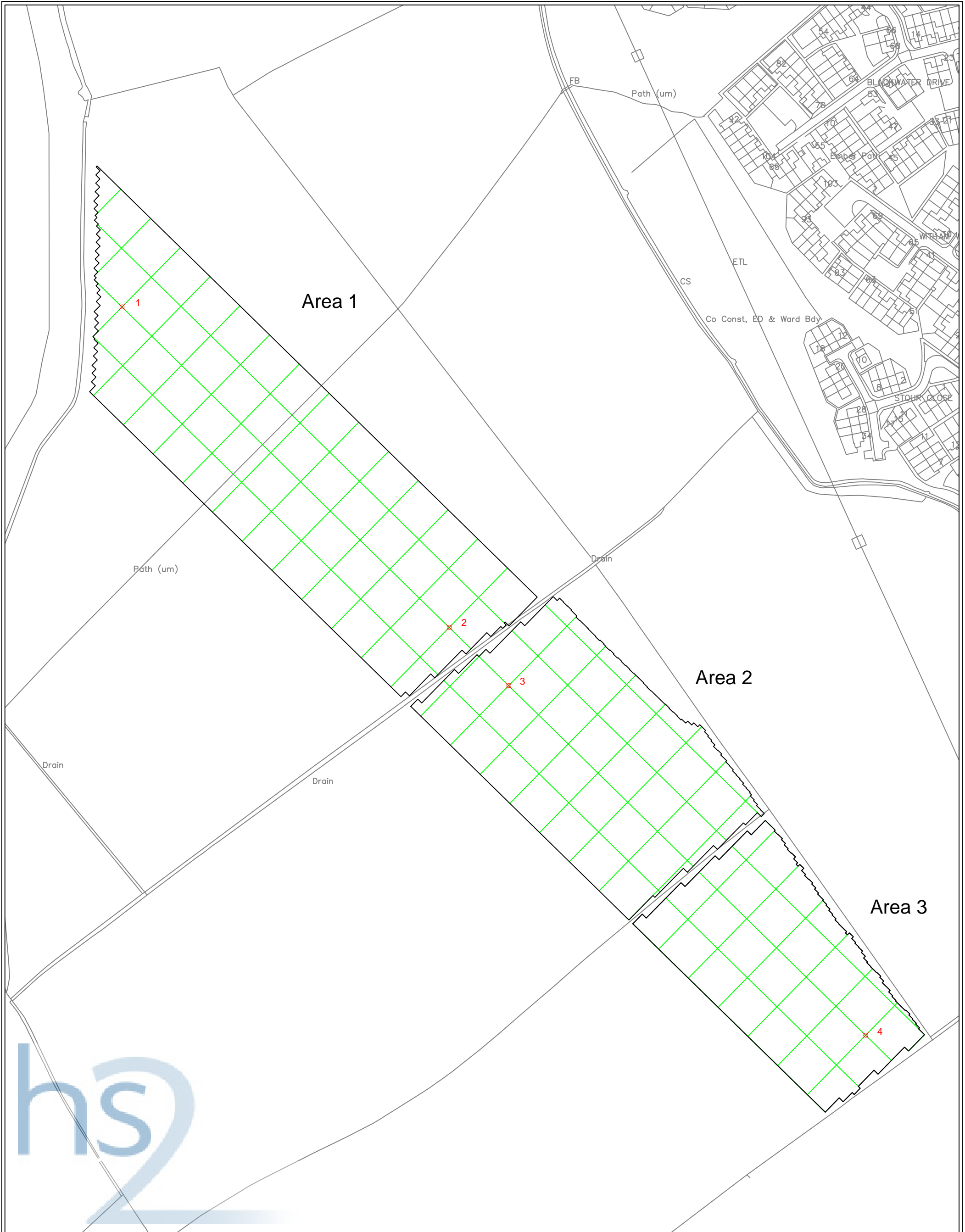
**Project:** G1317/9 HS2: C252 Country South  
CFA11 IB0AC South of Walton Court, Hartwell


**Title:** Magnetic Data - Area 3:  
XY Trace Plot & Greyscale Plot

Drawn by: ELWood


CH-004-11.36








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metres

0 100

1:2500 @ A3



GPS Points



30m Grid Division

**Project:** G1317/9 HS2: C252 Country South  
CFA11 IB0AC South of Walton Court, Hartwell

**Title:** IB0AC Magnetometer Survey -  
Tie-in Diagram

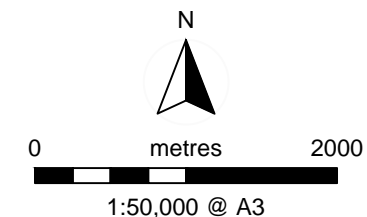
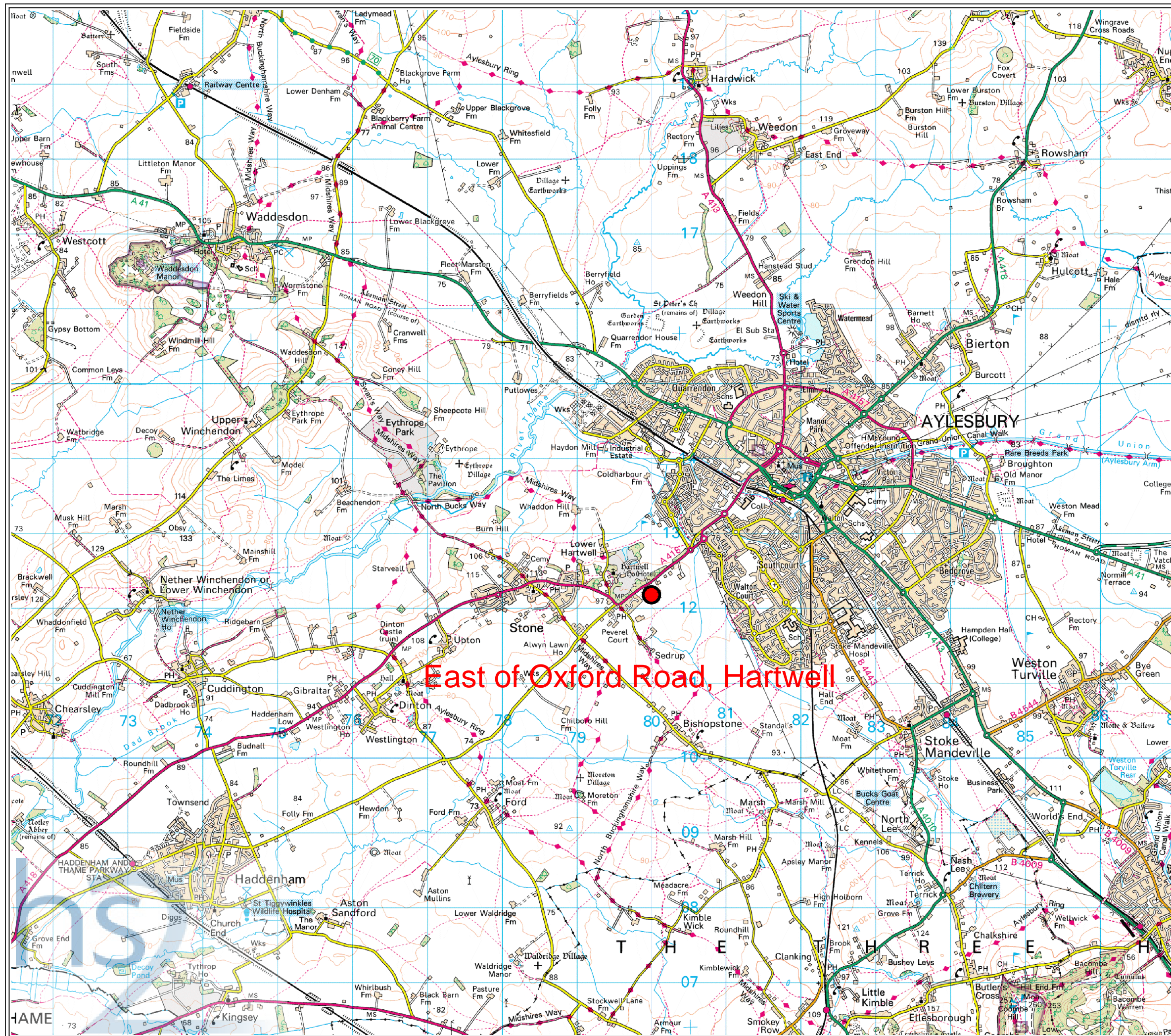
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Drawn by: ELWood

**CH-004-11.37**

Point	Eastings	Northings
1	480712.492	211724.691
2	480948.202	211493.735
3	480991.058	211451.743
4	481248.196	211199.791





 Site Locations

East of Oxford Road, Hartwell

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Project: G1317/8 HS2: C252 Country South  
CFA11 KB0AA East of Oxford Road, Hartwell

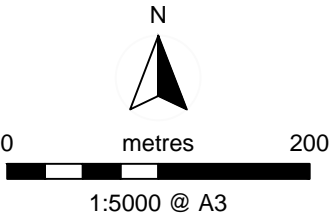
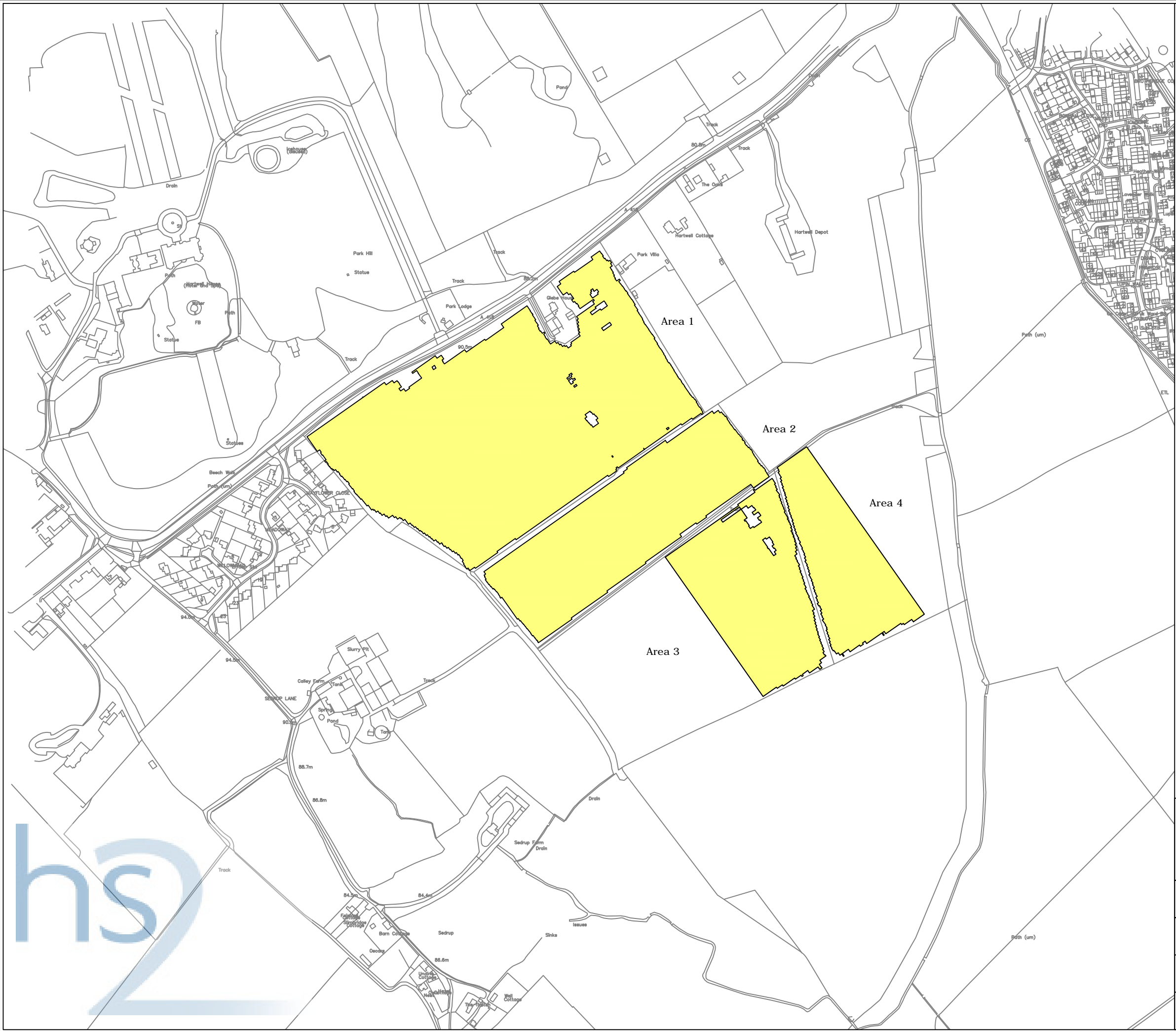
Title: KB0AA Site Location Diagram


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CH-004-11.38





 Area of Detailed Magnetometer Survey

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**Project:** G1317/8 HS2: C252 Country South  
CFA11 KB0AA East of Oxford Road, Hartwell

**Title:** KB0AA Location of Survey Areas

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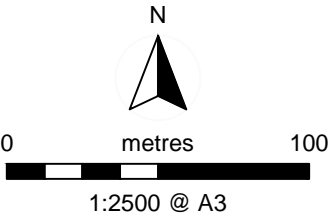
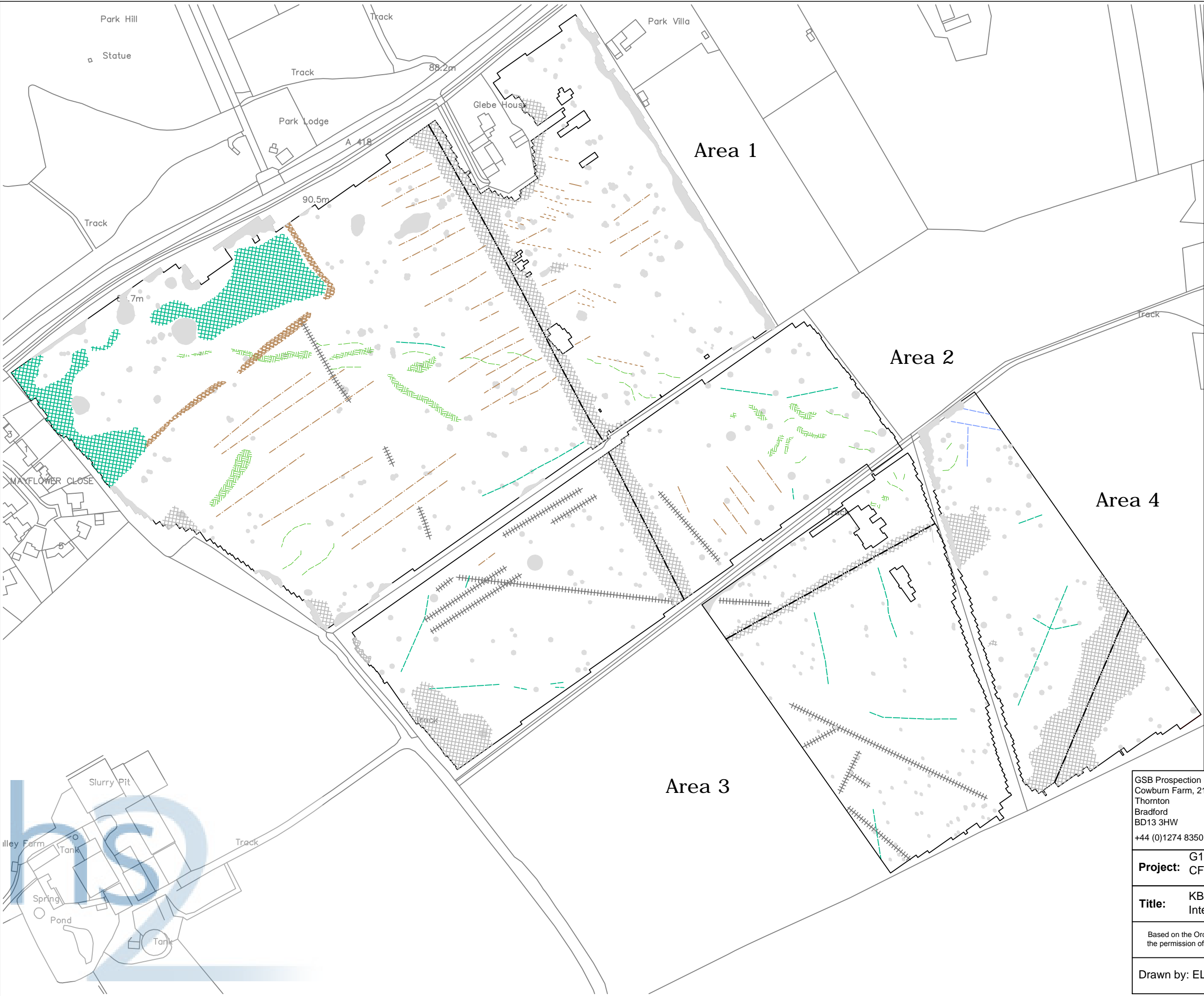
Drawn by: ELWood

CH-004-11.39





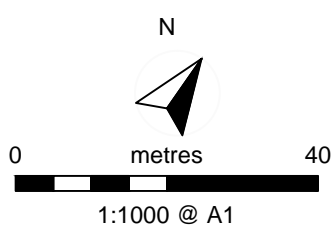
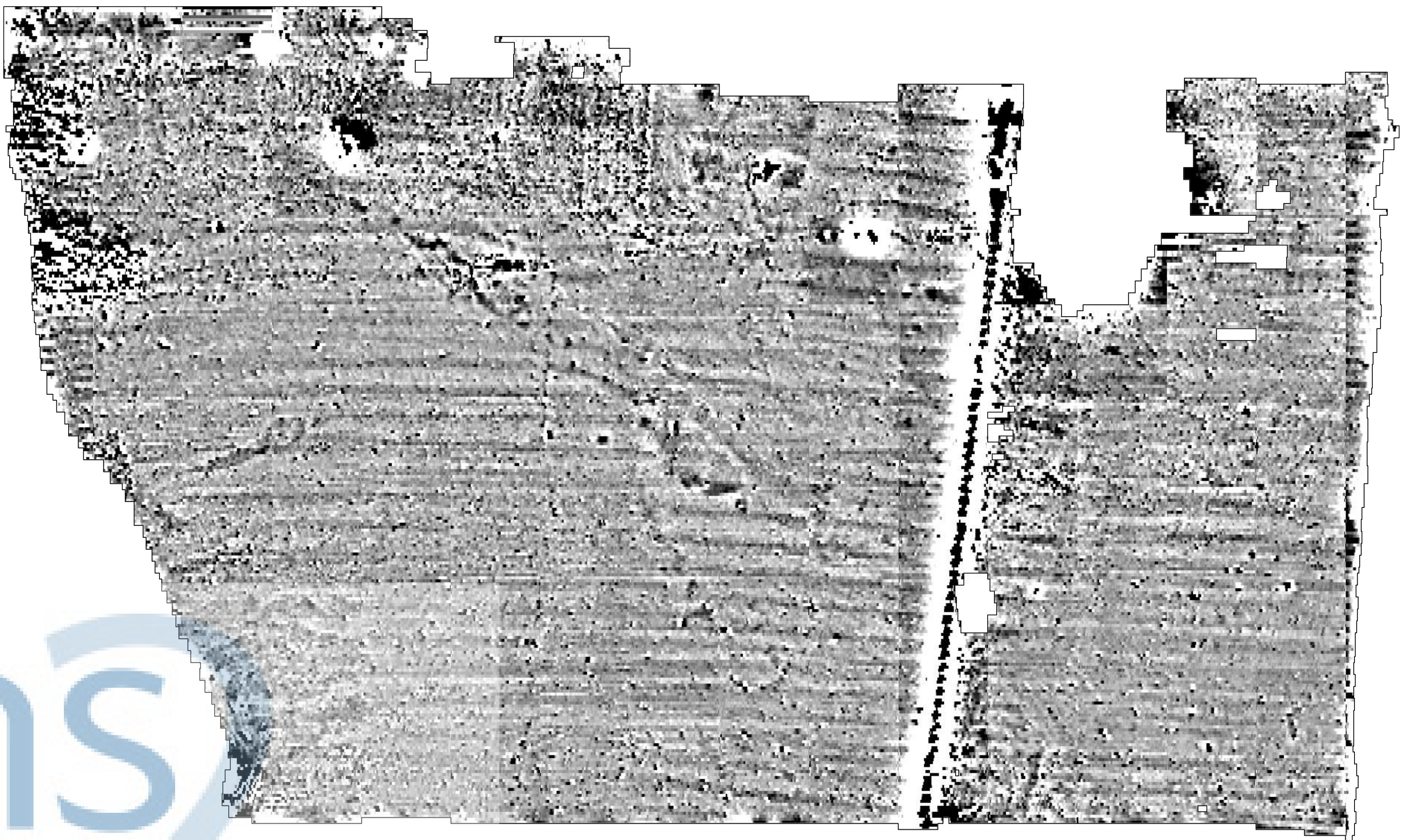
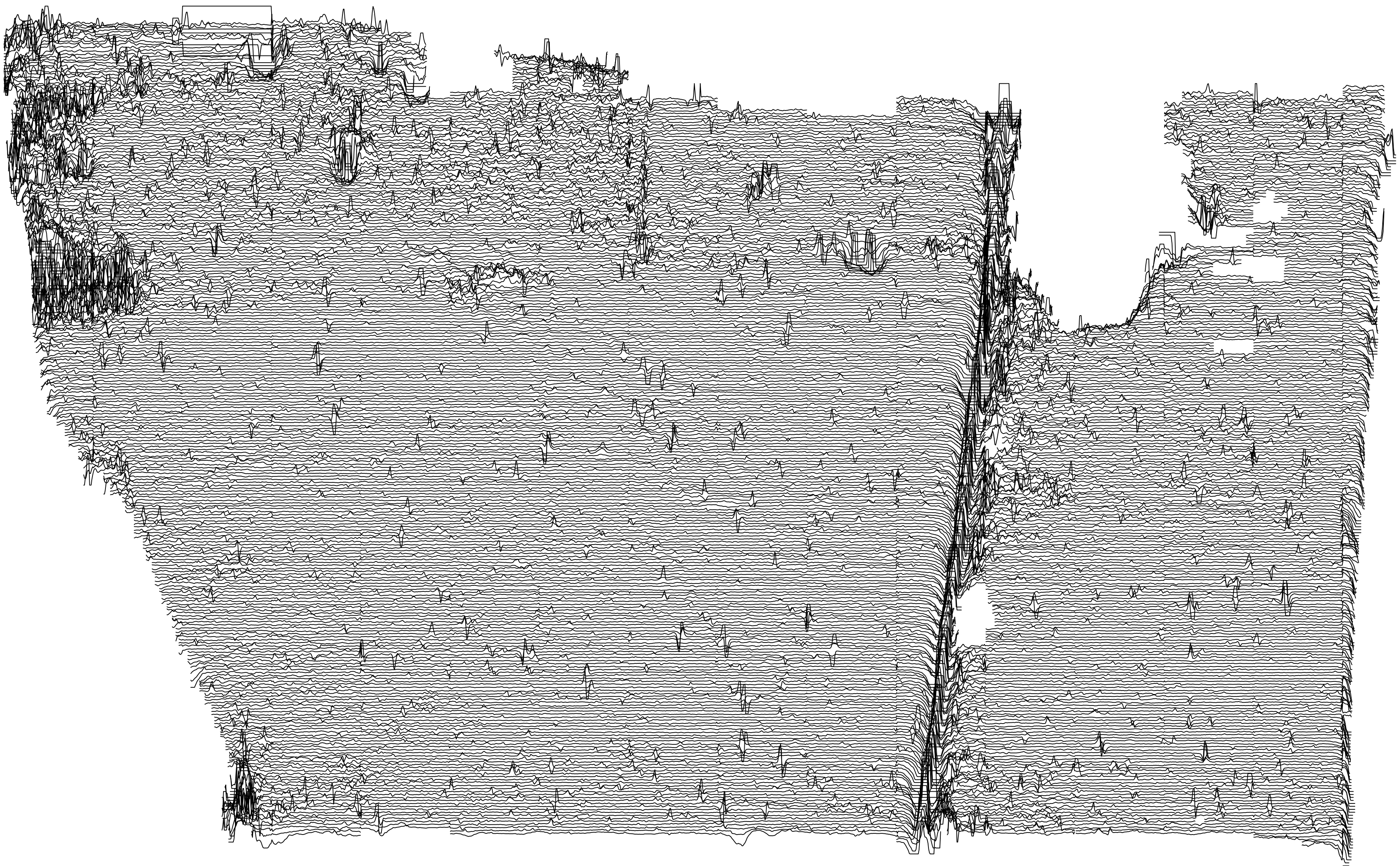




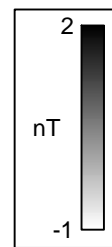
- Possible Archaeology (trend)
- Uncertain Origin (zone / trend)
- Natural (zone / trend)
- Old Field Boundary (zone)
- Agricultural (Ridge and Furrow)
- Agricultural (Ploughing)
- Agricultural (?Field Drains)
- Ferrous (discrete anomaly / zone / pipe)

<p>GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW +44 (0)1274 835016</p>		
<p><b>Project:</b> G1317/8 HS2: C252 Country South CFA11 KB0AA East of Oxford Road, Hartwell</p>		
<p><b>Title:</b> KB0AA Magnetometer Survey - Interpretation Plot</p>		
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<p>Drawn by: ELWood</p>		<p><b>CH-004-11.41</b></p>

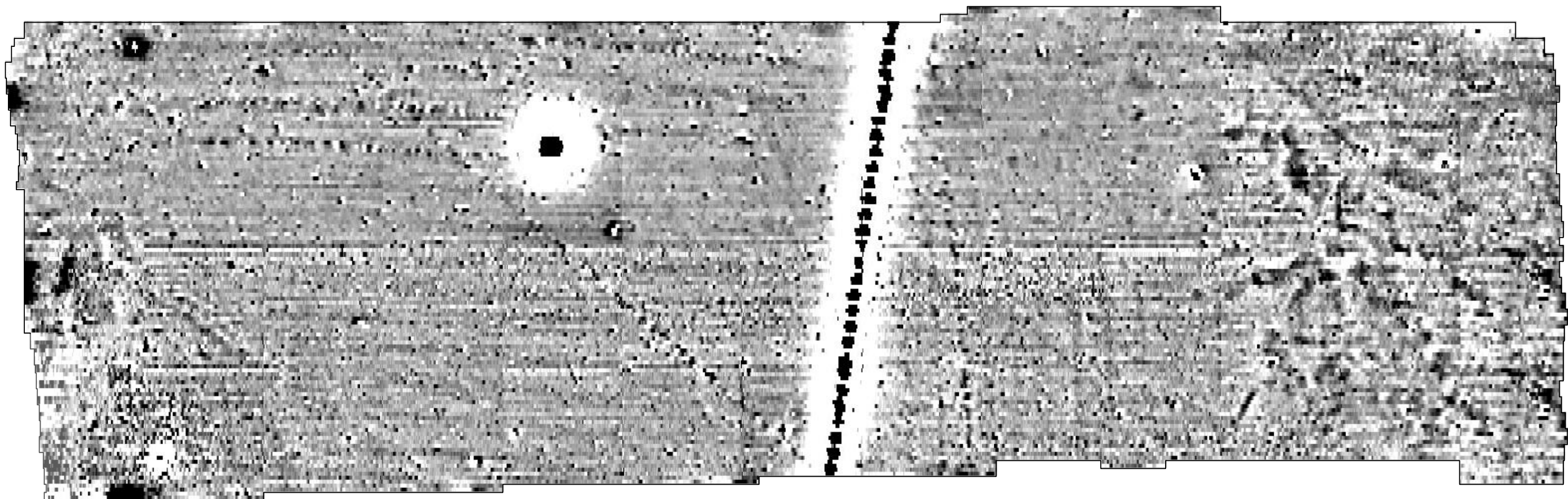
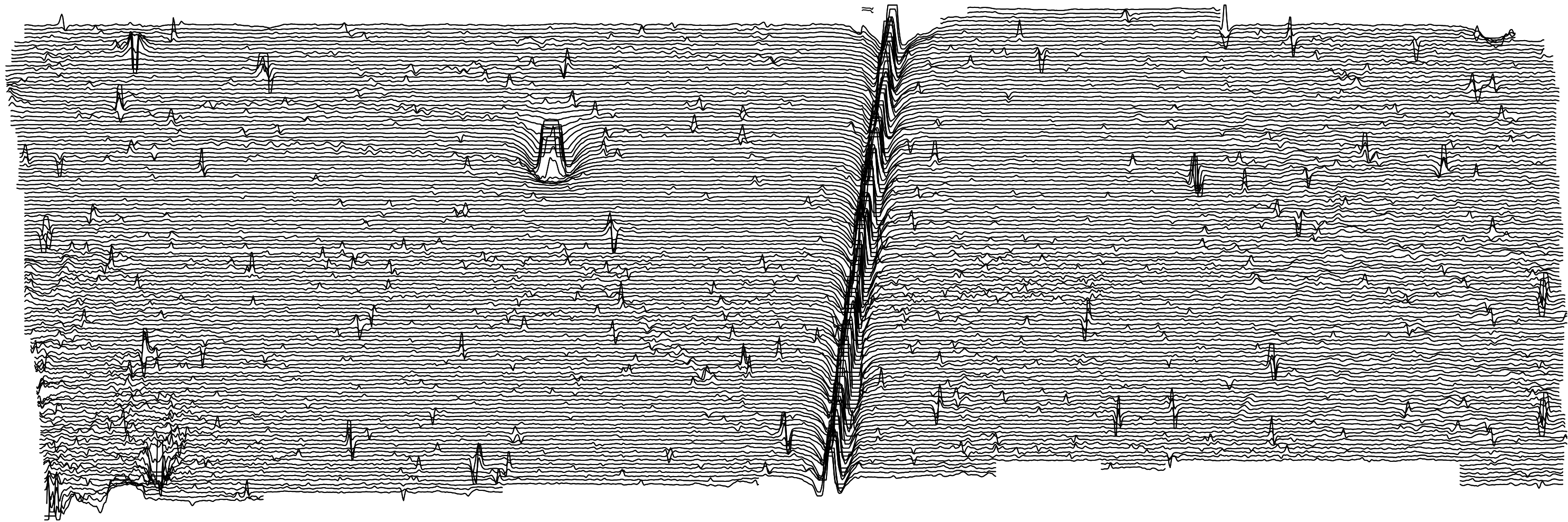




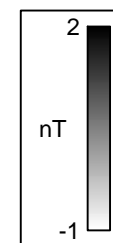
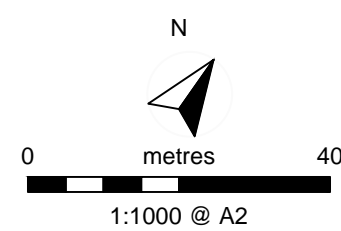
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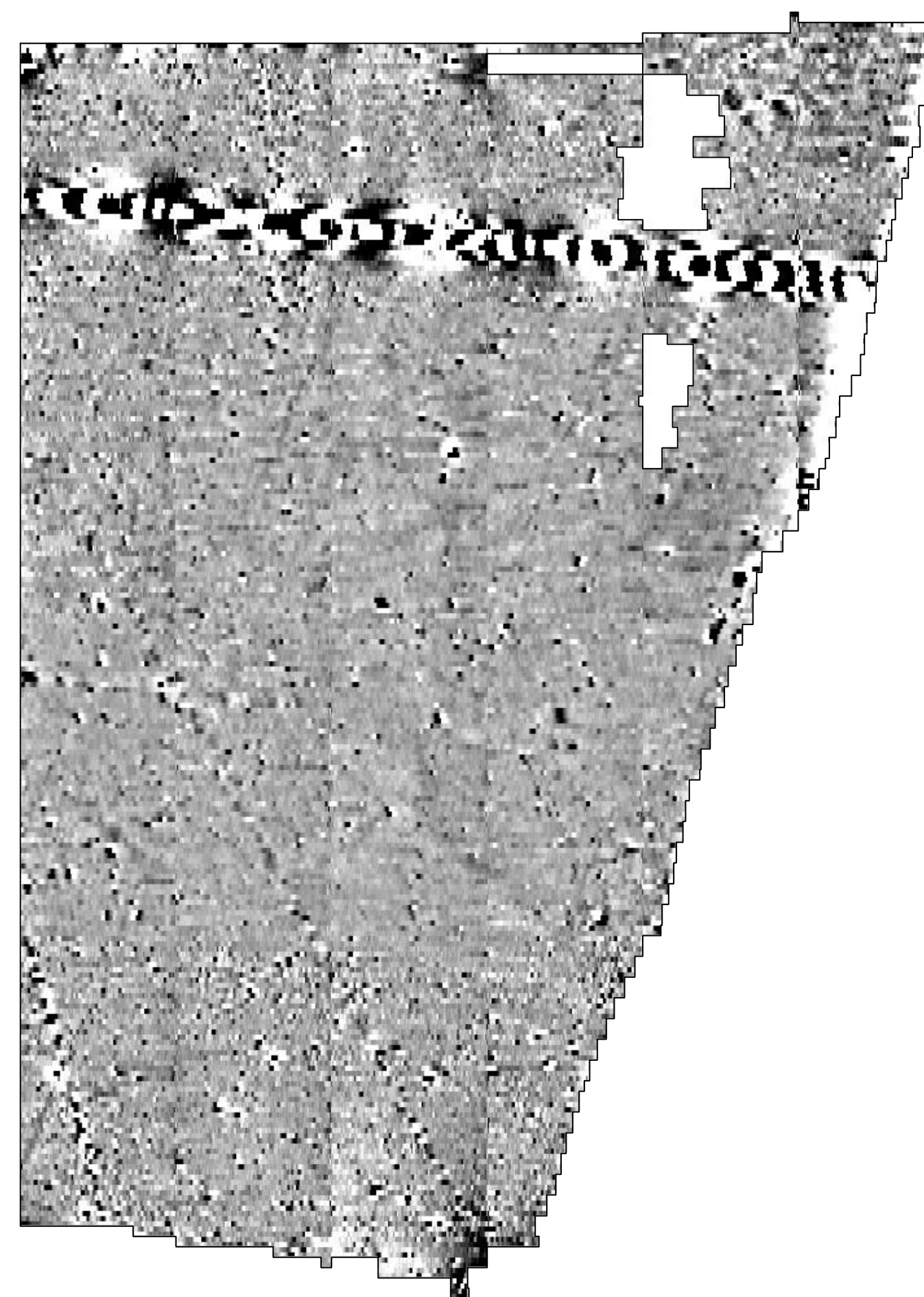
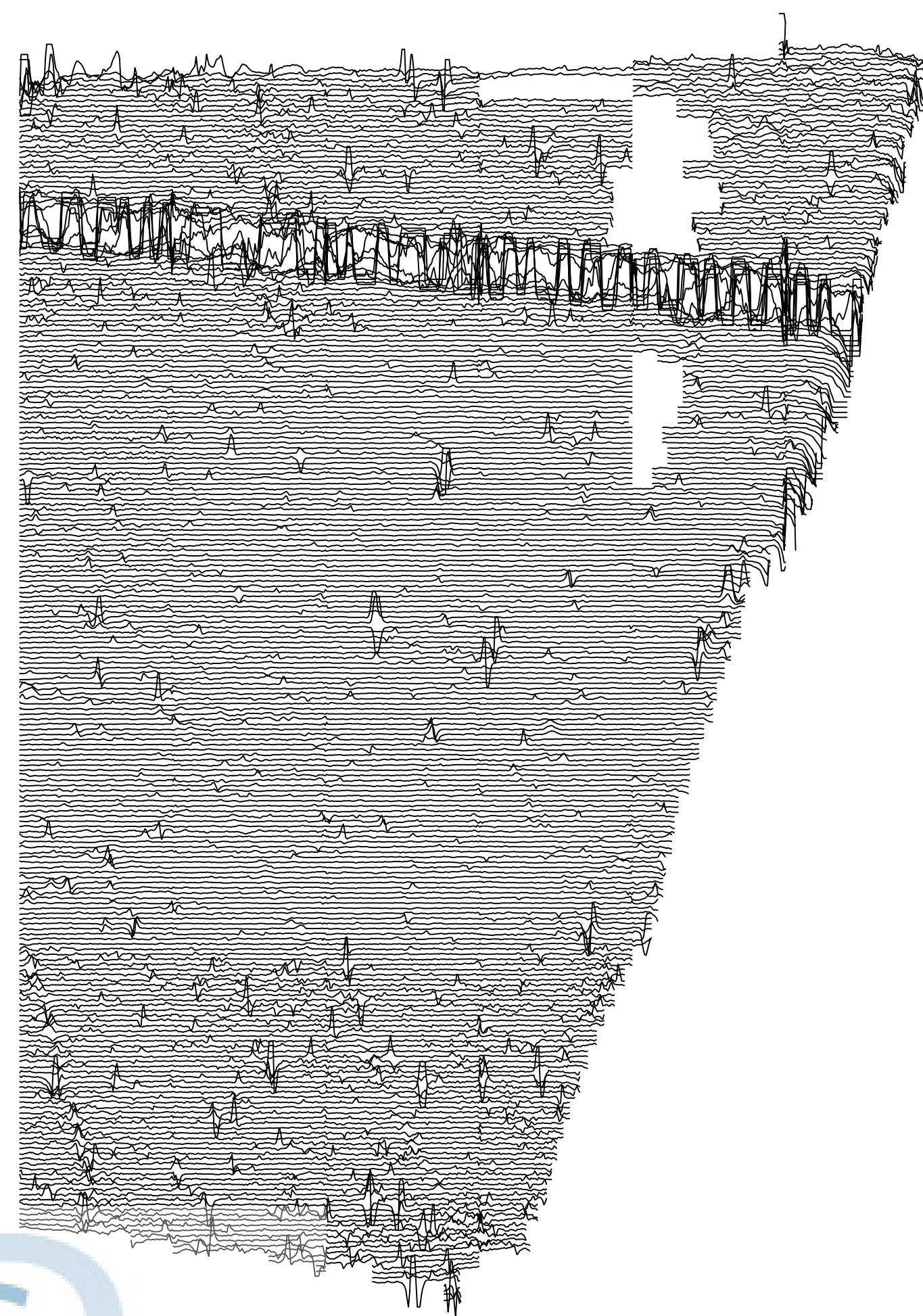


hs2

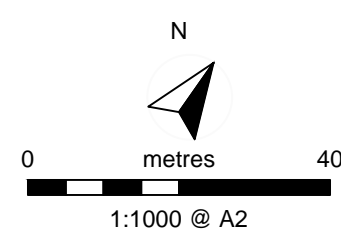


GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW  +44 (0)1274 835016		
<b>Project:</b> G1317/8 HS2: C252 Country South CFA11 KB0AA East of Oxford Road, Hartwell		
<b>Title:</b> Magnetic Data - Area 2: XY Trace Plot & Greyscale Plot		
Drawn by: ELWood		<b>CH-004-11.43</b>

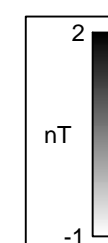




hs2



15 nT  
Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



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**SUMO**

**Project:** G1317/8 HS2: C252 Country South  
CFA11 KB0AA East of Oxford Road, Hartwell

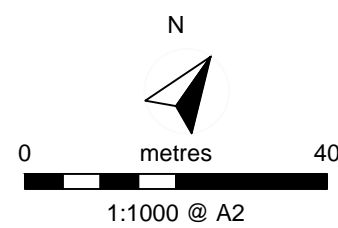
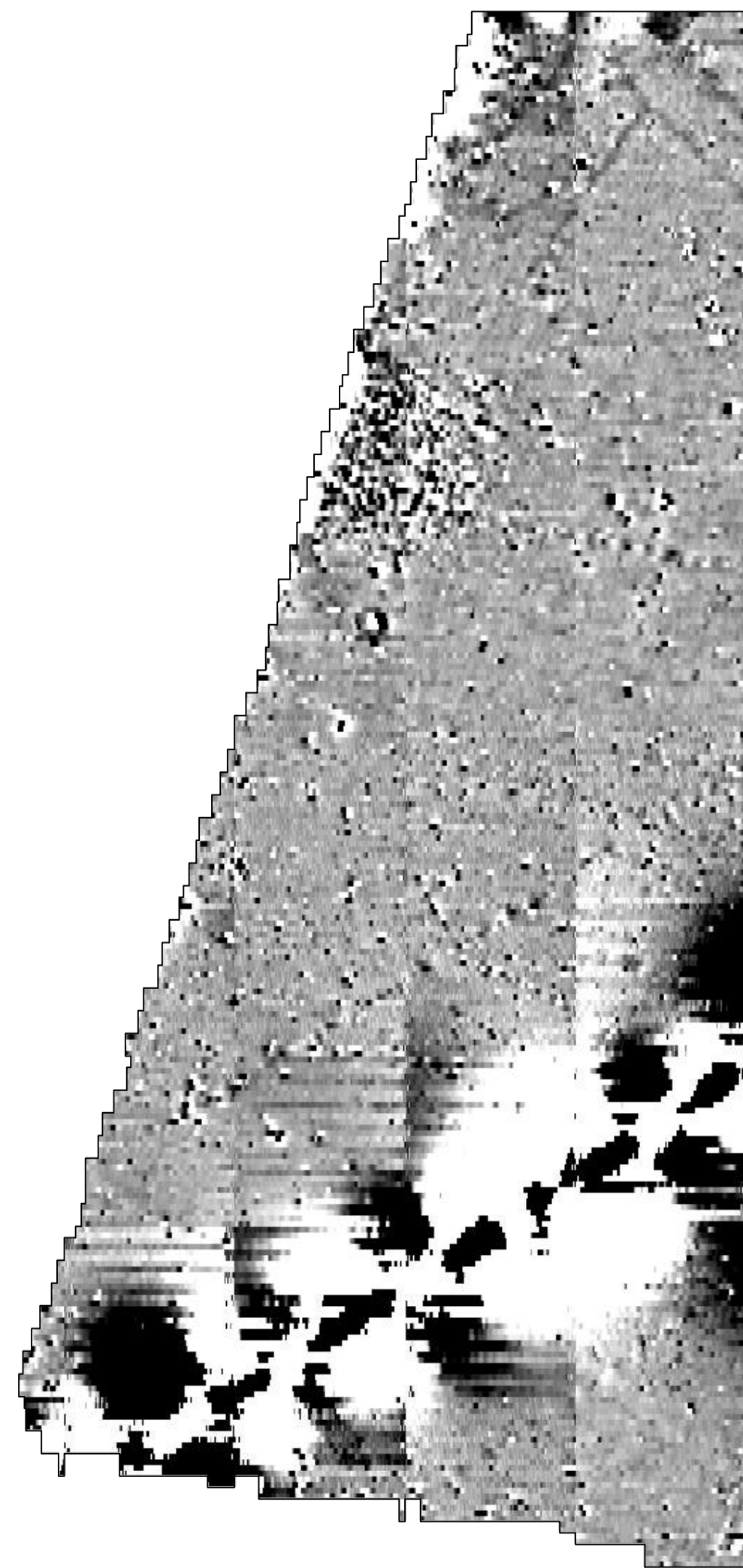
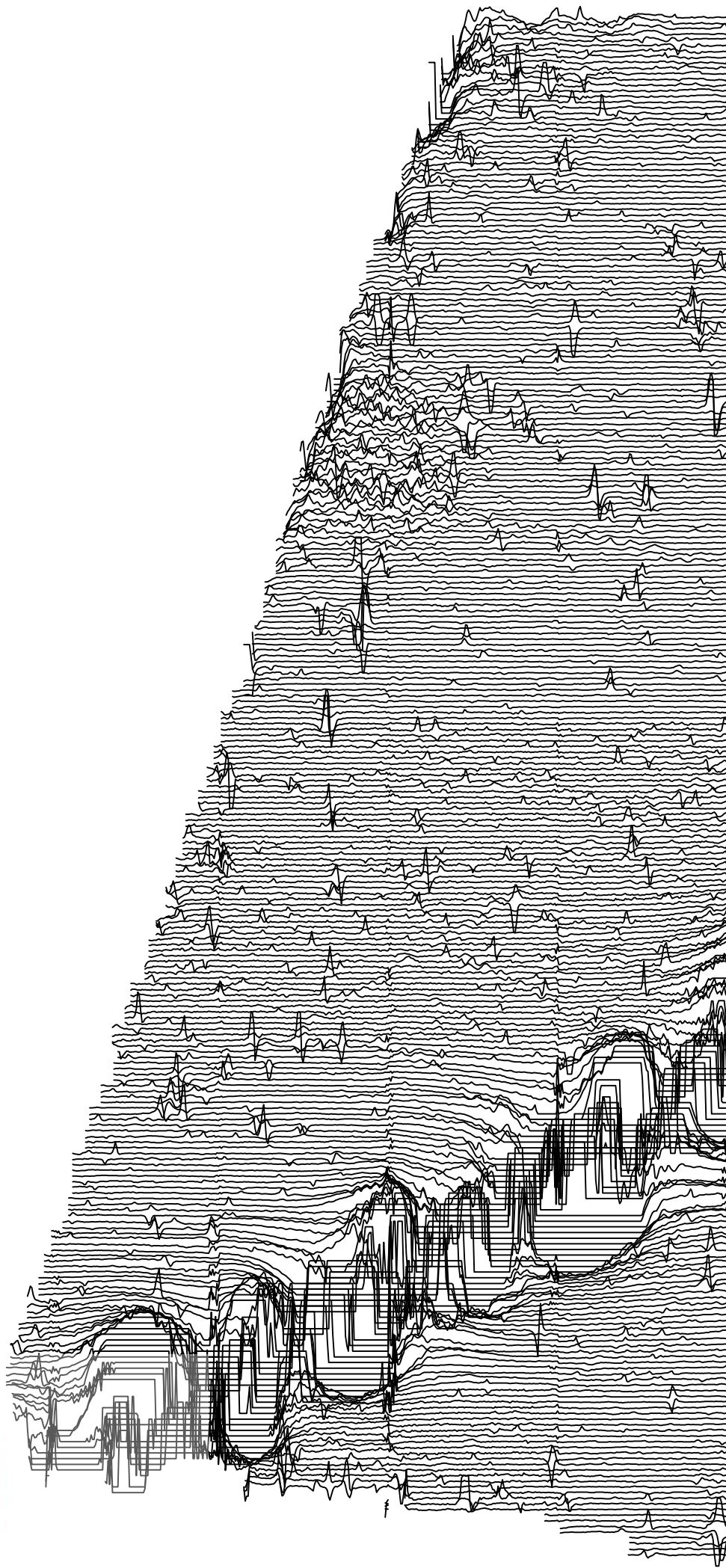
**Title:** Magnetic Data - Area 3:  
XY Trace Plot & Greyscale Plot

Drawn by: ELWood

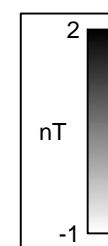
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hs2

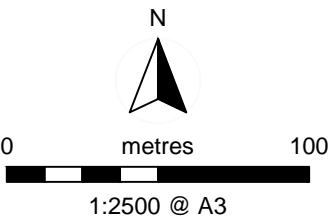




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Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



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<b>Project:</b> G1317/8 HS2: C252 Country South CFA11 KB0AA East of Oxford Road, Hartwell	
<b>Title:</b> Magnetic Data - Area 4: XY Trace Plot & Greyscale Plot	
Drawn by: ELWood	CH-004-11.45






-  Tie-in Point
-  30m Grid Division

Point	Eastings	Northings
1	479873.343	212225.145
2	479994.133	212053.361
3	480143.289	212414.958
4	480264.079	212243.174
5	480070.441	211996.995
6	480340.387	212186.808
7	480269.452	212026.908
8	480465.776	212164.953
9	480372.987	211879.665
10	480569.310	212017.710

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Project:

G1317/8 HS2: C252 Country South  
CFA11 KB0AA East of Oxford Road, Hartwell

Title:

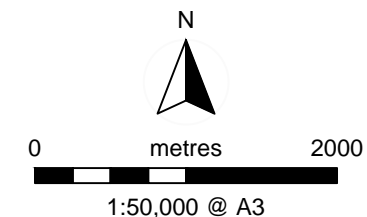
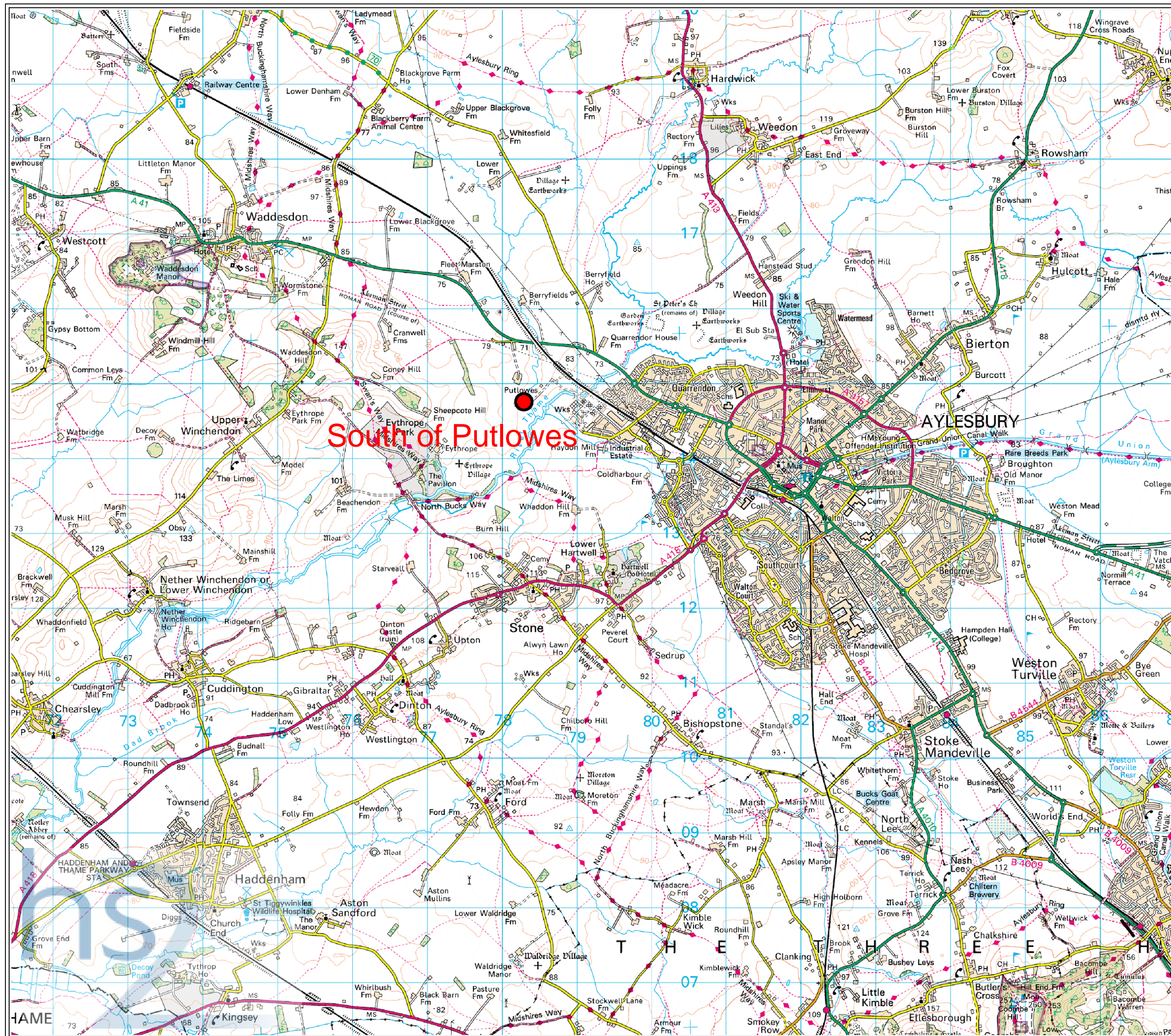
KB0AA Magnetometer Survey -  
Tie-in Diagram

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Drawn by: ELWood

CH-004-11.46





 Site Locations

South of Putlowes

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Project: G1317/10 HS2: C252 Country South  
CFA11 KB0AC South of Putlowes

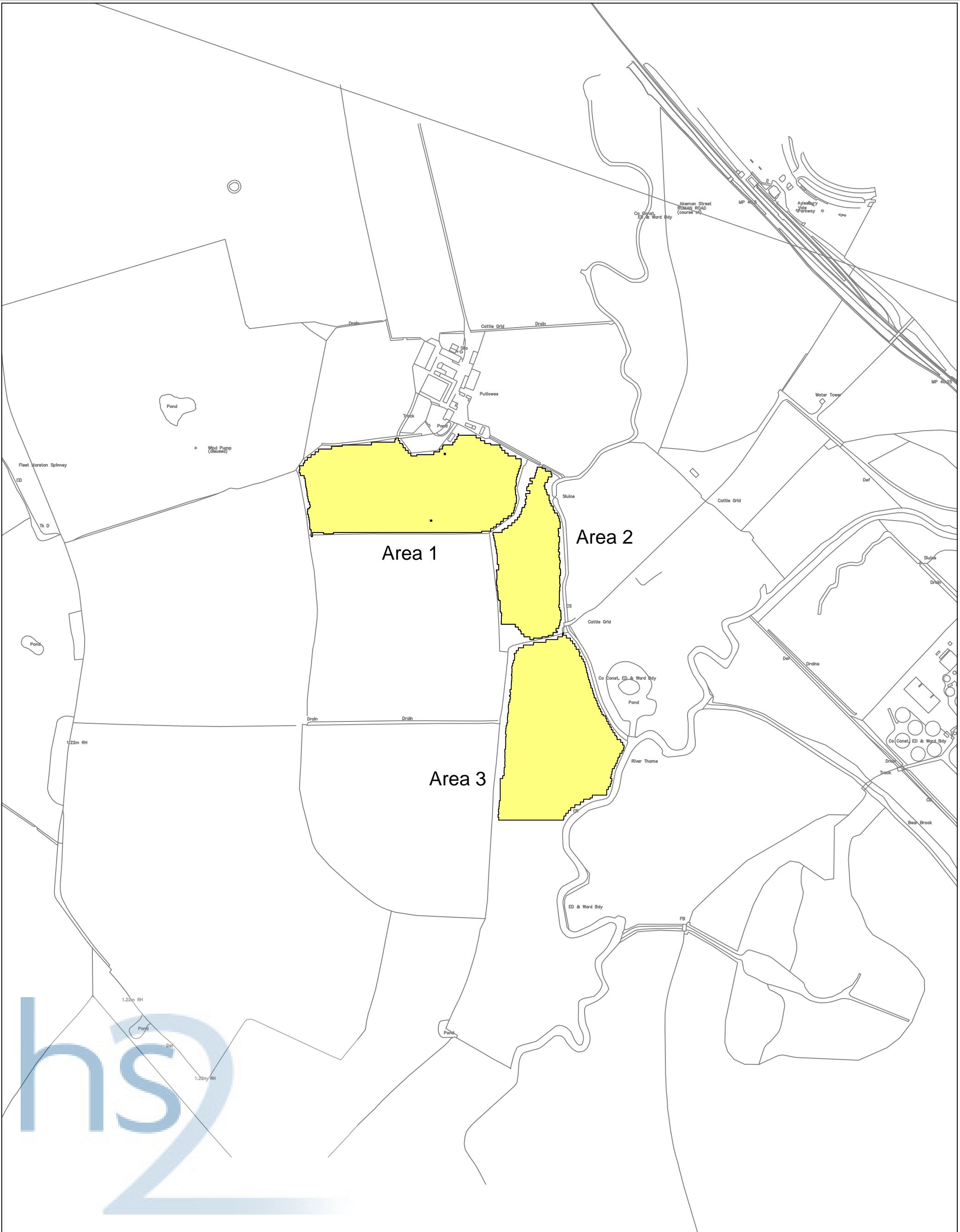
Title: KB0AC Site Location Diagram





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Drawn by: ELWood

CH-004-11.47




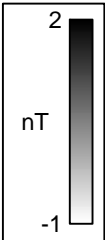


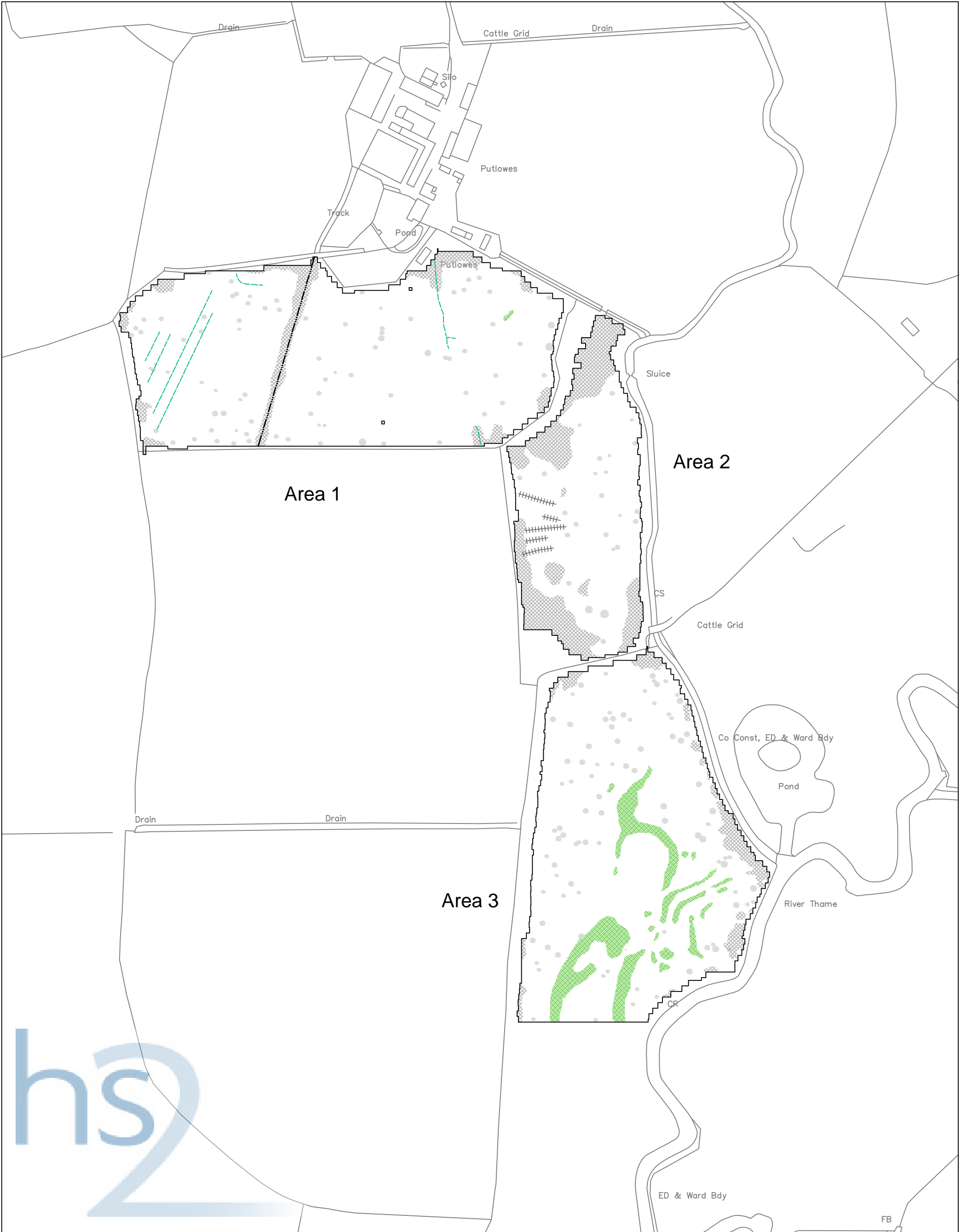


<div><p>GSB PROSPECTION Ltd Cowburn Farm, 21 Market Street Thornton, Bradford, BD13 3HW +44 (0)1274 835016</p></div>	<div><p>0      metres      200</p><p>1:5000 @ A3</p></div>	<div> Detailed Magnetometer Survey</div>	<b>Project:</b> G1317/10 HS2: C252 Country South CFA11 KB0AC South of Putlowes	
			<b>Title:</b> KB0AC Magnetometer Survey - Location of Survey Areas	
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			Drawn by: ELWood	<b>CH-004-11.48</b>



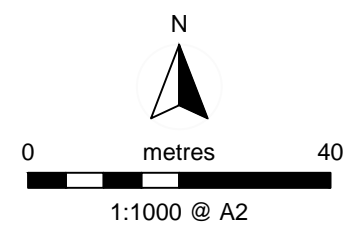
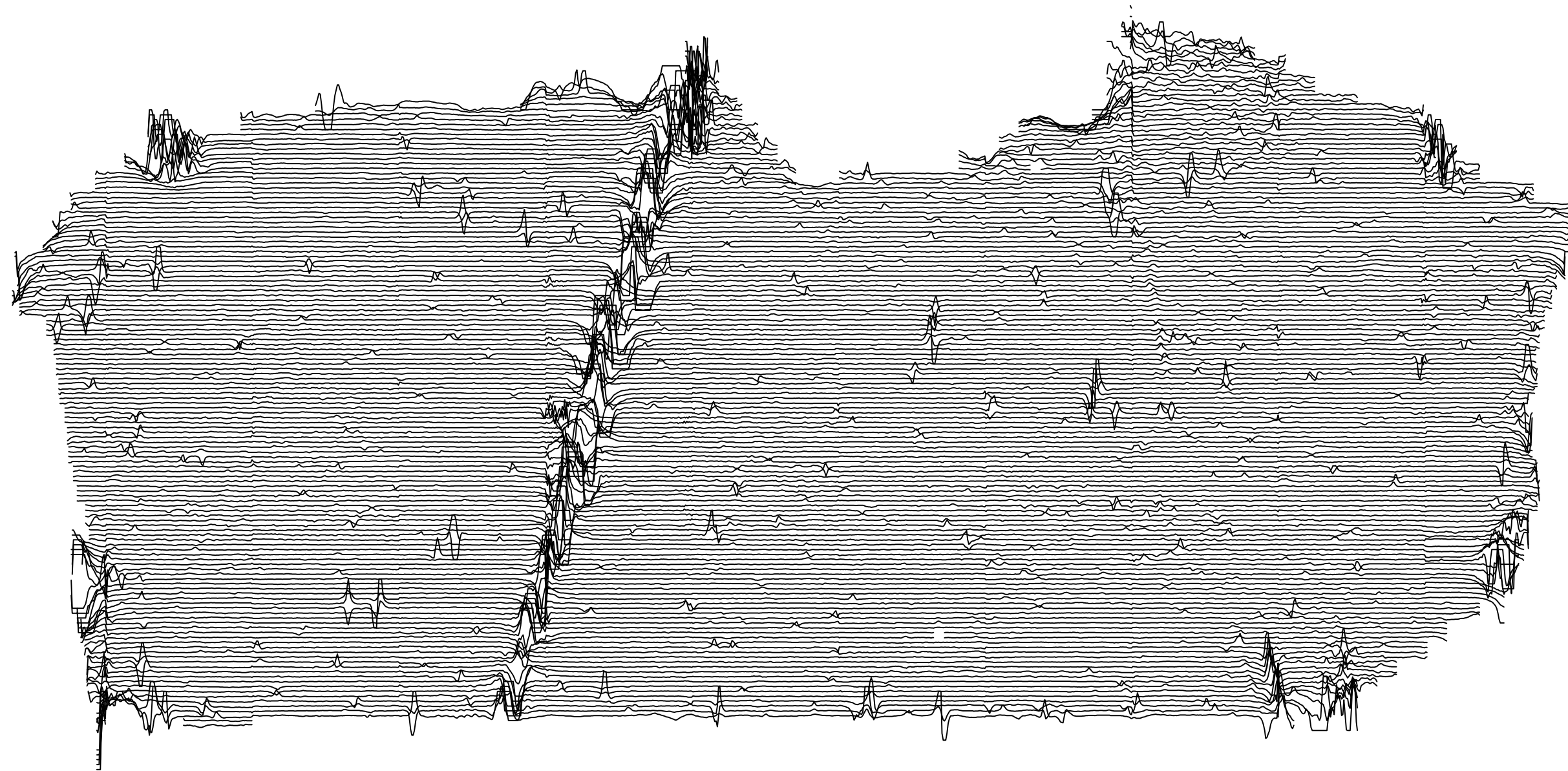


<div><p>GSB PROSPECTION Ltd GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton, Bradford, BD13 3HW +44 (0)1274 835016</p></div>	<div><p>0 100 metres</p><p>1:2500 @ A3</p></div>	<div><p>2 nT -1</p></div>	<b>Project:</b> G1317/10 HS2: C252 Country South CFA11 KB0AC South of Putlowes	
			<b>Title:</b> KB0AC Magnetometer Survey - Greyscale Plot	
			Based on the Ordnance Survey Map provided by the client. Reproduced with the permission of the Controller of HMSO © Crown Copyright (AL100018665)	
			Drawn by: ELWood	<b>CH-004-11.49</b>



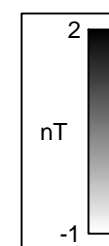
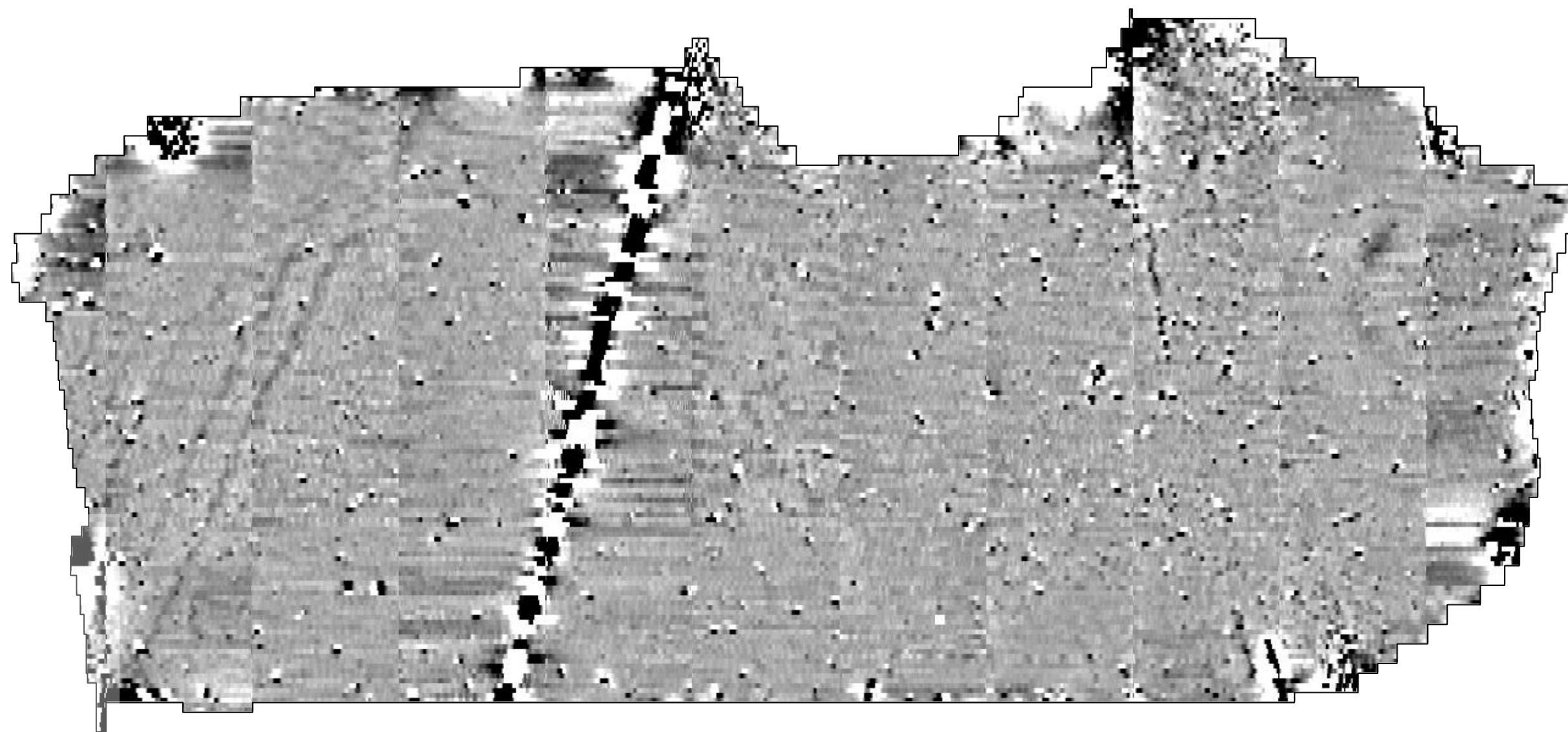
 GSB PROSPECTION Ltd Cowburn Farm, 21 Market Street Thornton, Bradford, BD13 3HW +44 (0)1274 835016 	 0 100 metres 1:2500 @ A3	 Uncertain Origin (trend)  Natural (zone)  Ferrous (discrete anomaly / zone / pipe)	 Agriculture - drain	<b>Project:</b> G1317/10 HS2: C252 Country South CFA11 KB0AC South of Putlowes	
				<b>Title:</b> KB0AC Magnetometer Survey - Interpretation Plot	
				Based on the Ordnance Survey Map provided by the client. Reproduced with the permission of the Controller of HMSO © Crown Copyright (AL100018665)	
				Drawn by: ELWood	<b>CH-004-11.50</b>





15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



hs2

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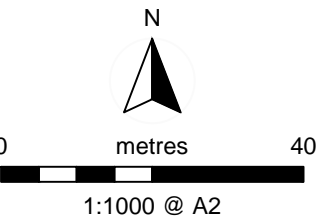
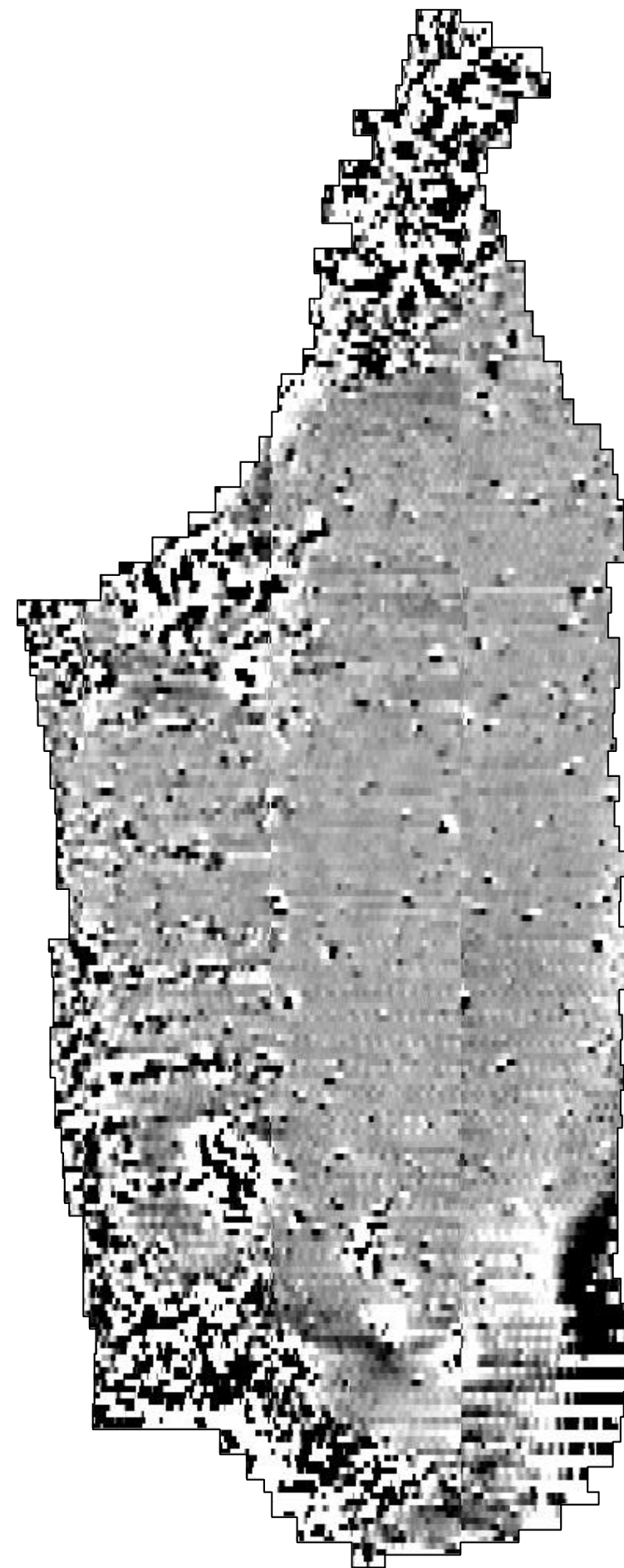
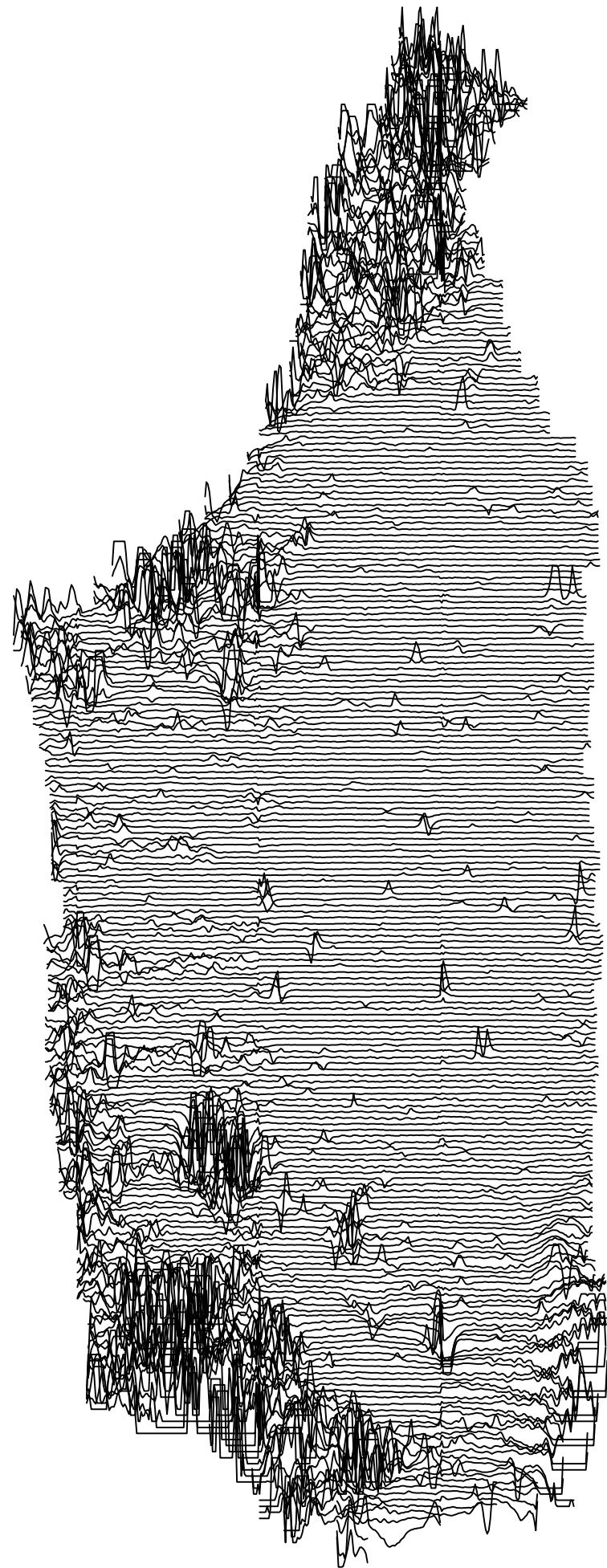
**Project:** G1317/10 HS2: C252 Country South  
CFA11 KB0AC South of Putlowes

**Title:** Magnetic Data - Area 1:  
XY Trace Plot & Greyscale Plot

Drawn by: ELWood

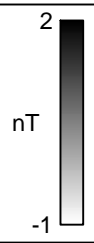
CH-004-11.51



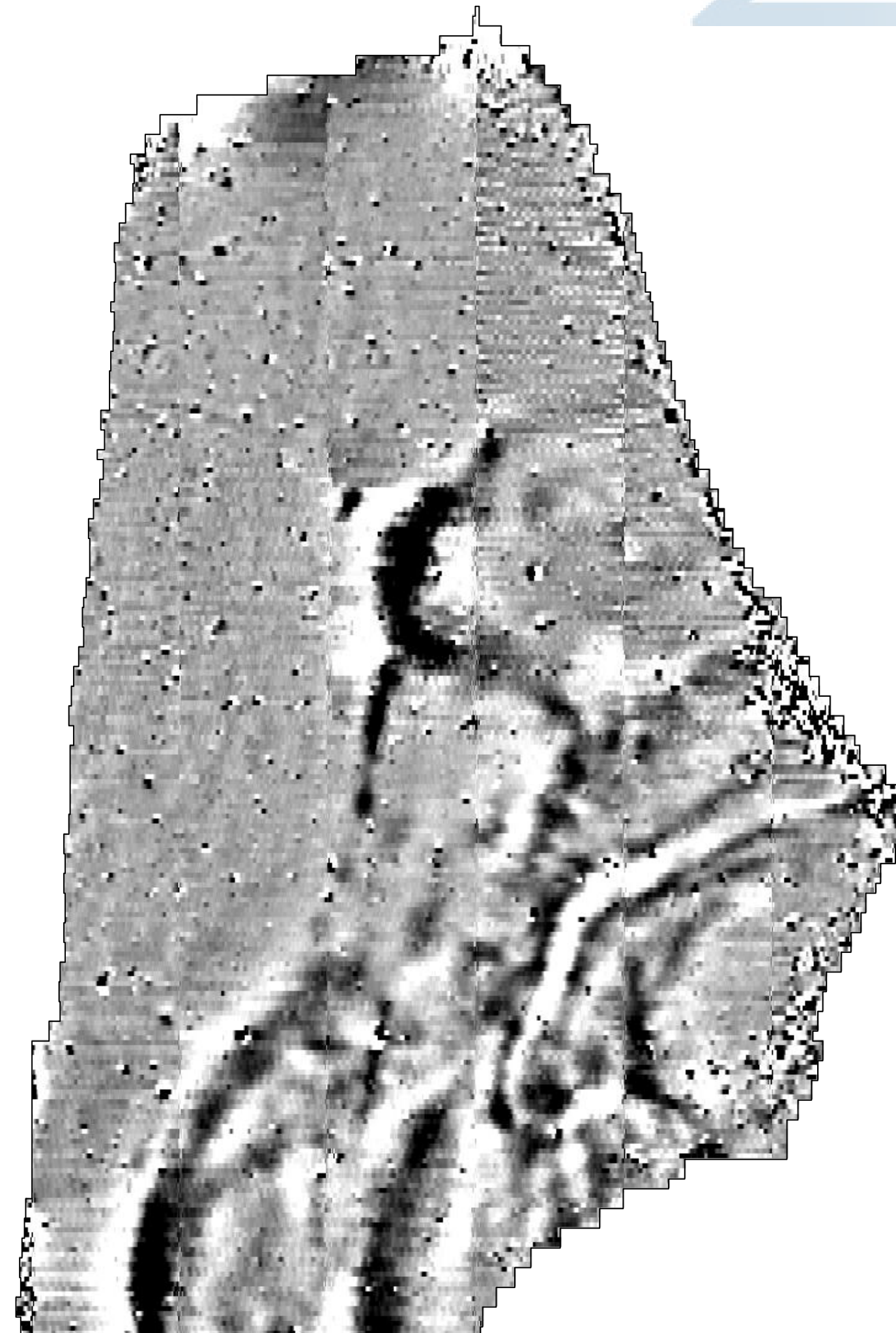
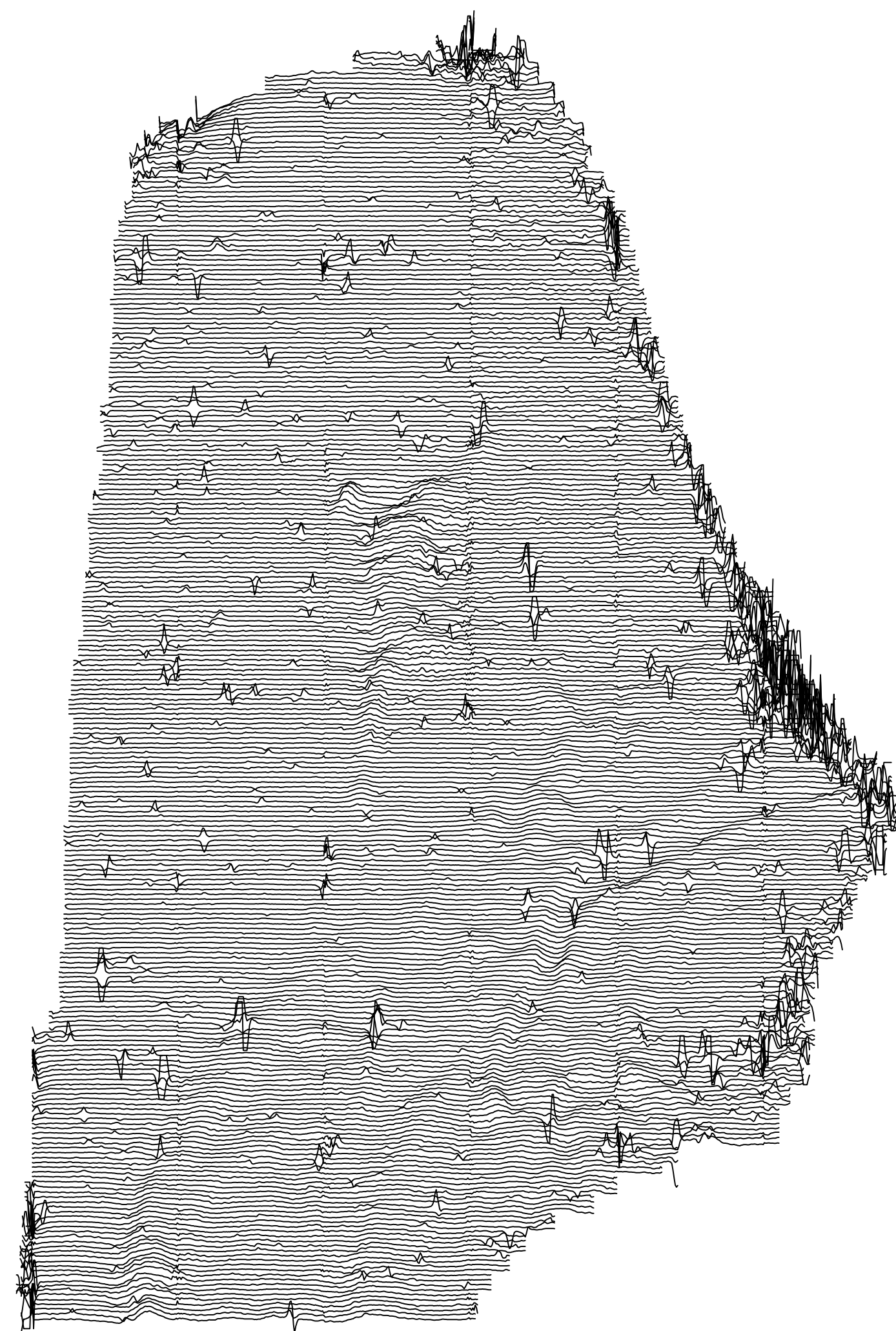
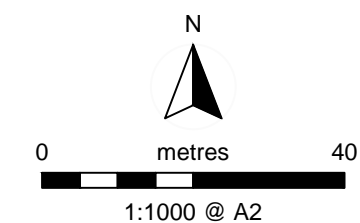


15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT

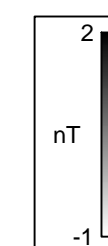






15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



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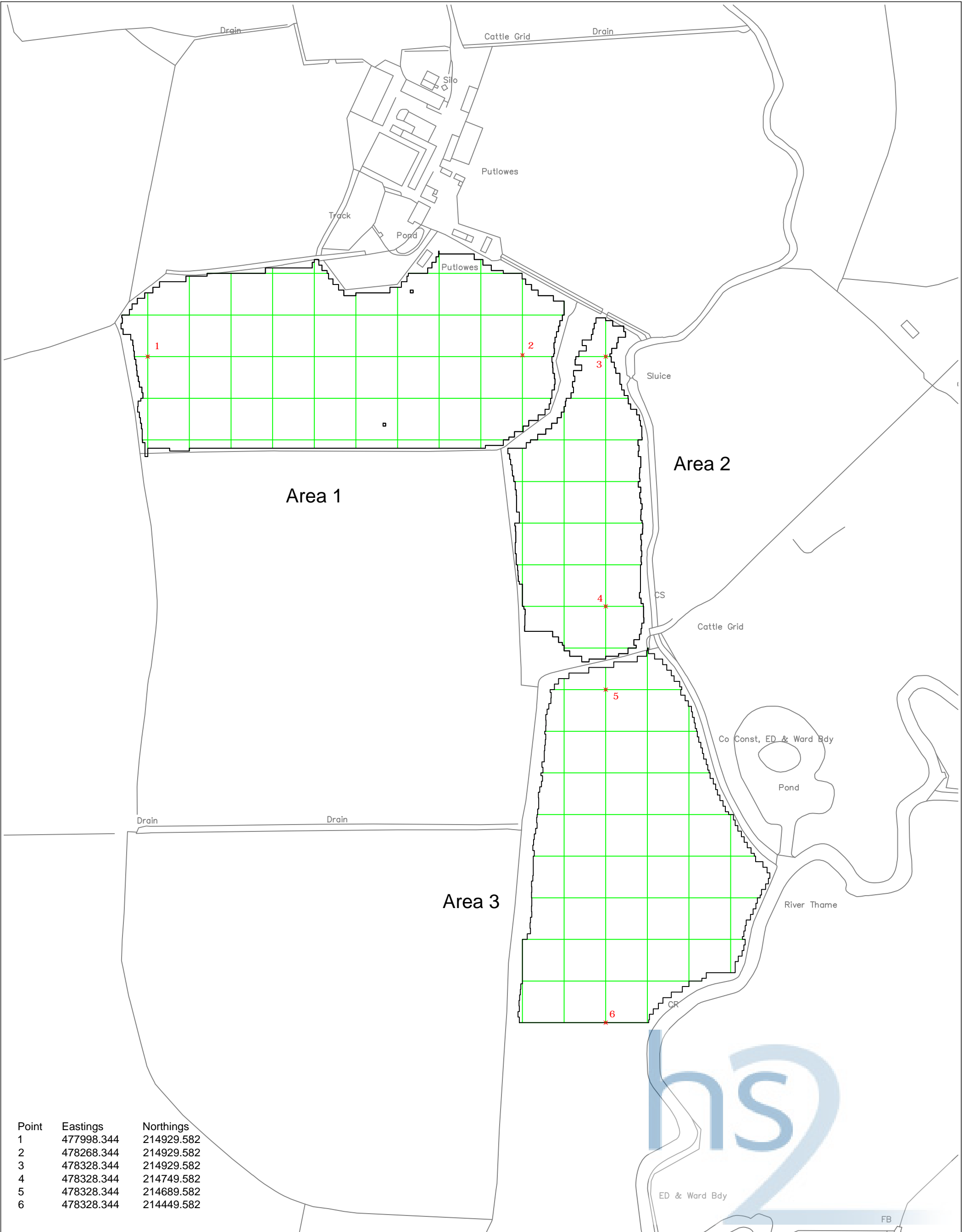
**Project:** G1317/10 HS2: C252 Country South  
CFA11 KB0AC South of Putlowes

**Title:** Magnetic Data - Area 3:  
XY Trace Plot & Greyscale Plot

Drawn by: ELWood

CH-004-11.53






Point	Eastings	Northings
1	477998.344	214929.582
2	478268.344	214929.582
3	478328.344	214929.582
4	478328.344	214749.582
5	478328.344	214689.582
6	478328.344	214449.582



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0      metres      100

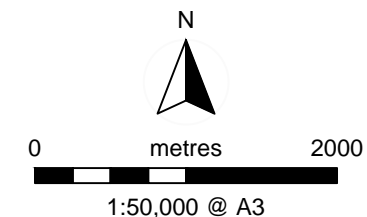
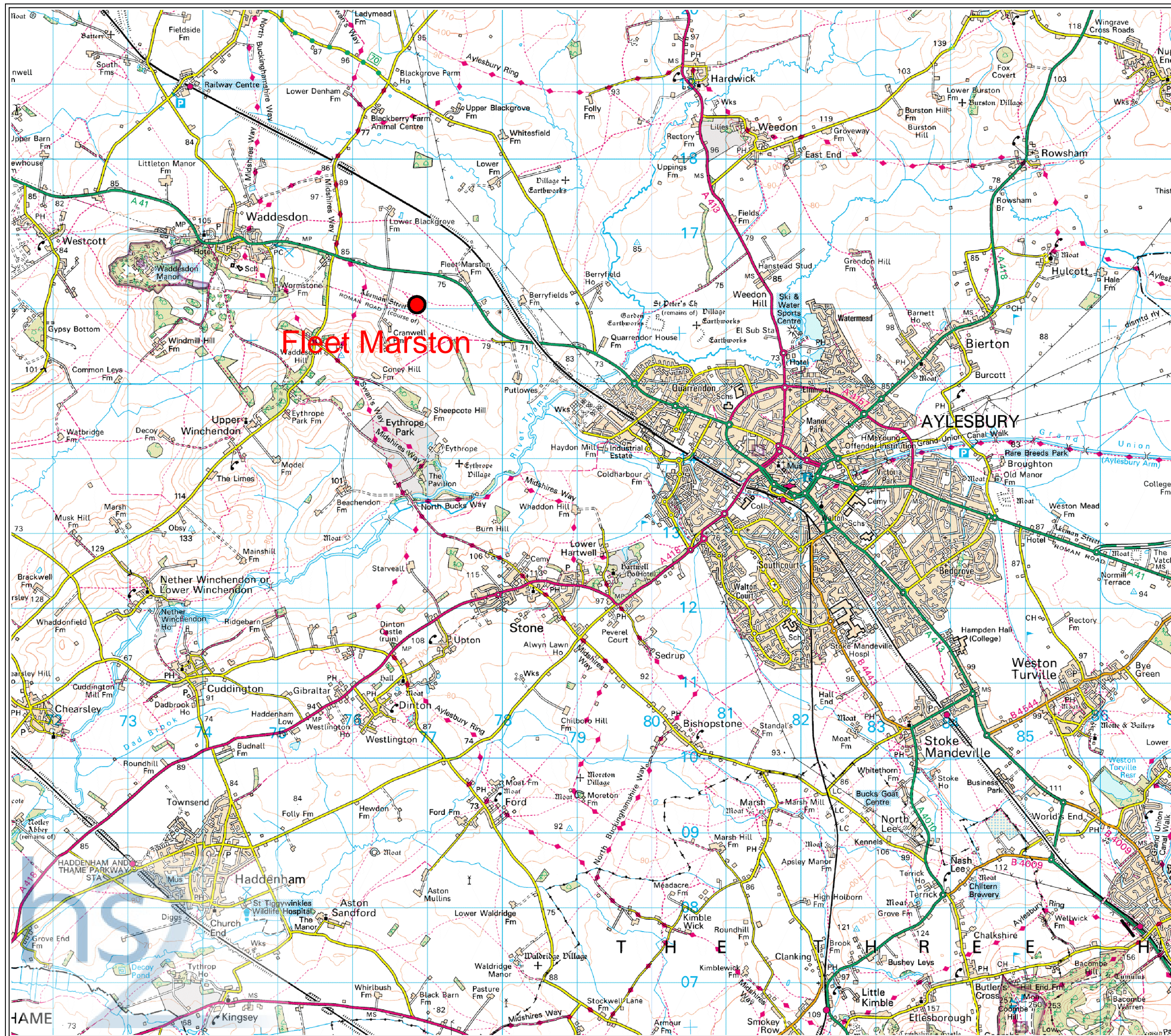
1:2500 @ A3

 GPS Point

 30m Grid Division

<b>Project:</b> G1317/10 HS2: C252 Country South CFA11 KB0AC South of Putlowes	
<b>Title:</b> KB0AC Magnetometer Survey - Tie-in Diagram	
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Drawn by: ELWood	<b>CH-004-11.54</b>





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Project: G1317/11 HS2: C252 Country South  
CFA11 KB0AD (B) Fleet Marston

Title: KB0AD(B) Site Location Diagram

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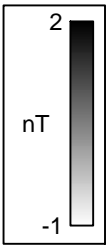
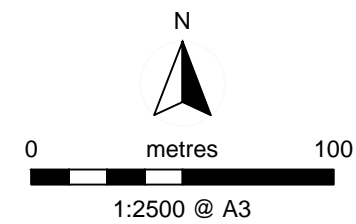
Drawn by: ELWood

CH-004-11.55









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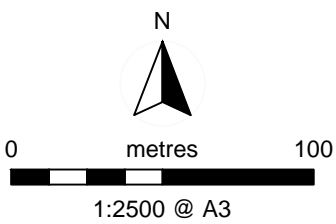
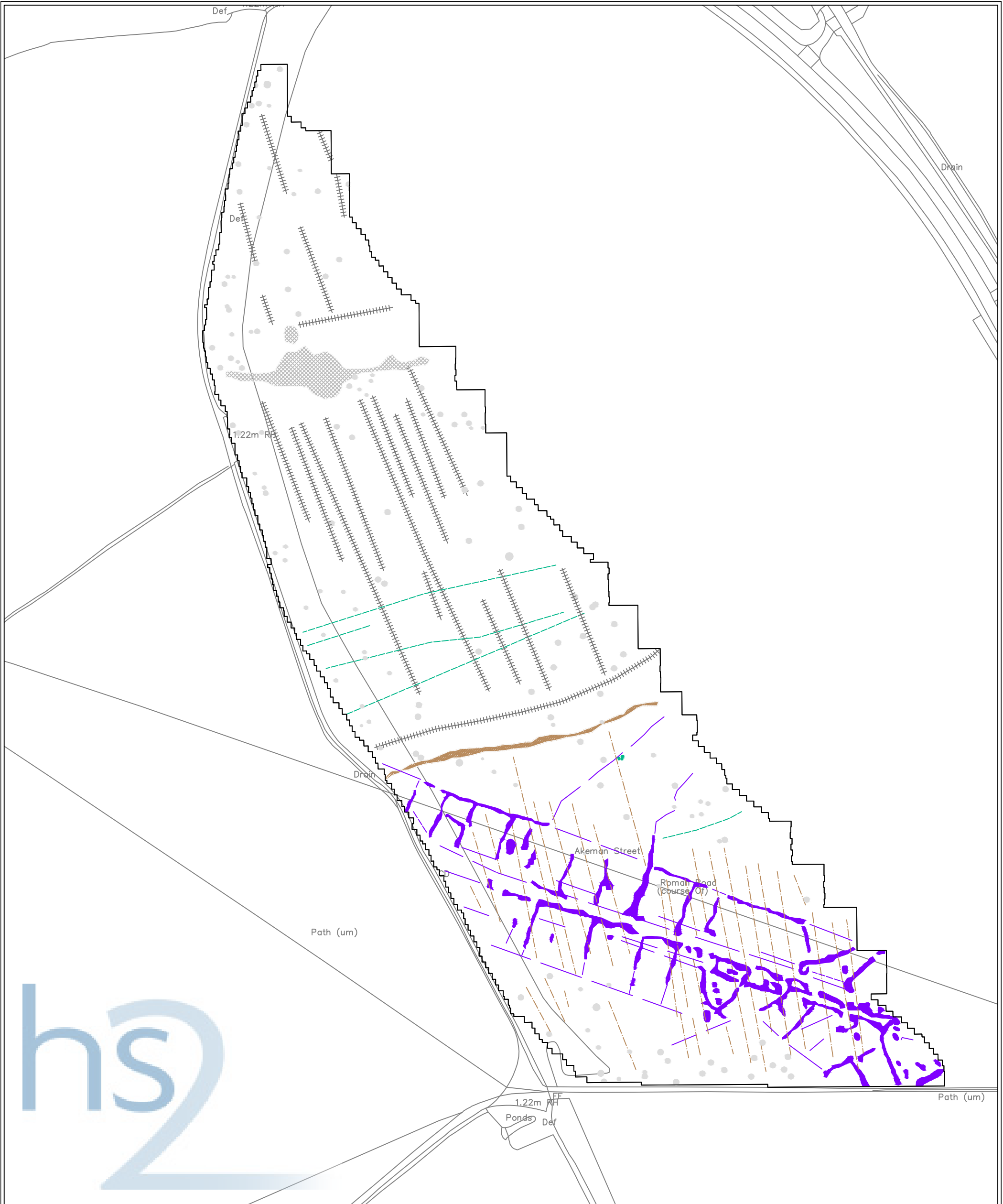
**Project:** G1317/11 HS2: C252 Country South  
CFA11 KB0AD (B) Fleet Marston







**Title:** KB0AD (B) Magnetometer Survey -  
Greyscale Plot

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Drawn by: ELWood

CH-004-11.57



- |  |   |
|--|---|
|  Archaeology<br>(discrete / trend)      |  Agricultural<br>(Ridge and Furrow)   |
|  Uncertain Origin<br>(discrete / trend) |  Agricultural<br>(?Field Drains)      |
|  Old Field Boundary<br>(zone)           |  Ferrous<br>(discrete anomaly / zone) |

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**Project:** G1317/11 HS2: C252 Country South  
CFA11 KB0AD (B) Fleet Marston

**Title:** KB0AD (B) Magnetometer Survey-  
Interpretation Plot

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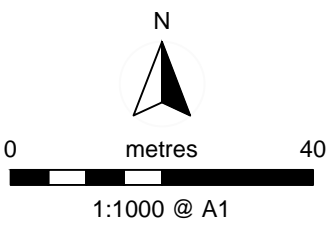
Drawn by: ELWood

CH-004-11.58





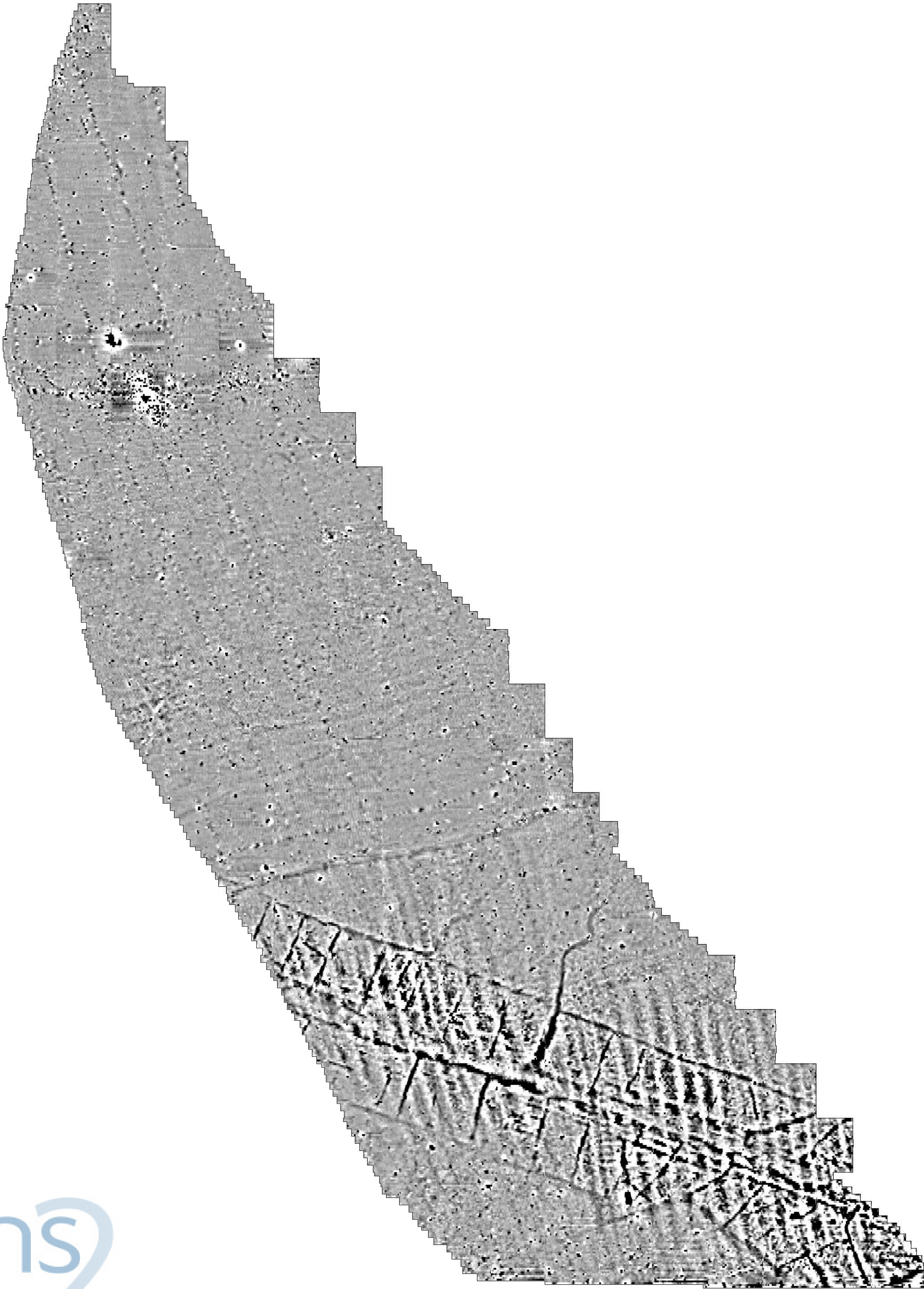
hs2



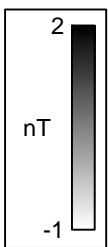
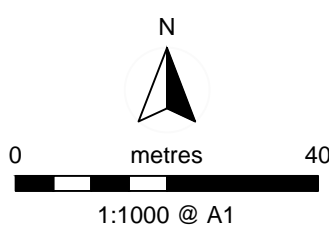
15 nT  
Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT

<div>GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW +44 (0)1274 836016</div> <div><b>GSB</b> PROSPECTION Ltd</div>	
<b>Project:</b> G1317/11 HS2: C252 Country South CFA11 KB0AD (B) Fleet Marston	
<b>Title:</b> Magnetic Data: XY Trace Plot	
Drawn by: ELWood	CH-004-11.59



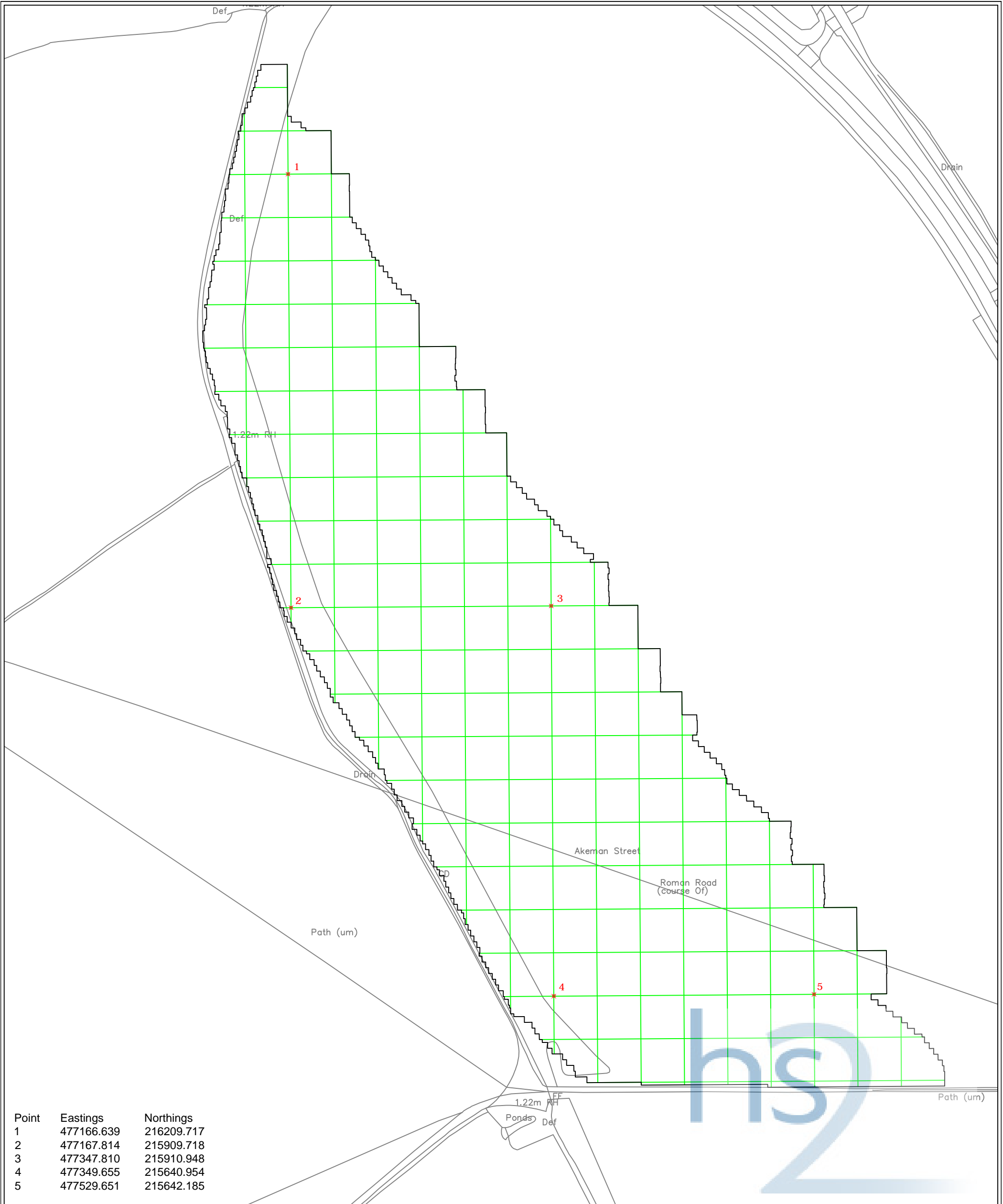


hs2

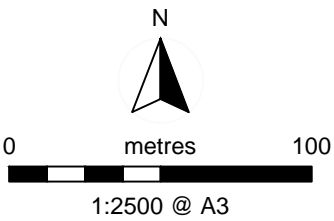




<div>GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW +44 (0)1274 835016</div> <div><b>GSB</b> PROSPECTION Ltd</div>	
<b>Project:</b> G1317/11 HS2: C252 Country South CFA11 KB0AD (B) Fleet Marston	
<b>Title:</b> Magnetic Data: Greyscale Plot	
Drawn by: ELWood	CH-004-11.60






Point	Eastings	Northings
1	477166.639	216209.717
2	477167.814	215909.718
3	477347.810	215910.948
4	477349.655	215640.954
5	477529.651	215642.185



-  GPS Point
-  30m Grid Division

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Project:

G1317/11 HS2: C252 Country South  
CFA11 KB0AD (B) Fleet Marston

Title:

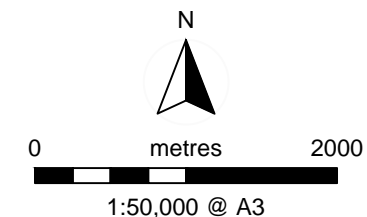
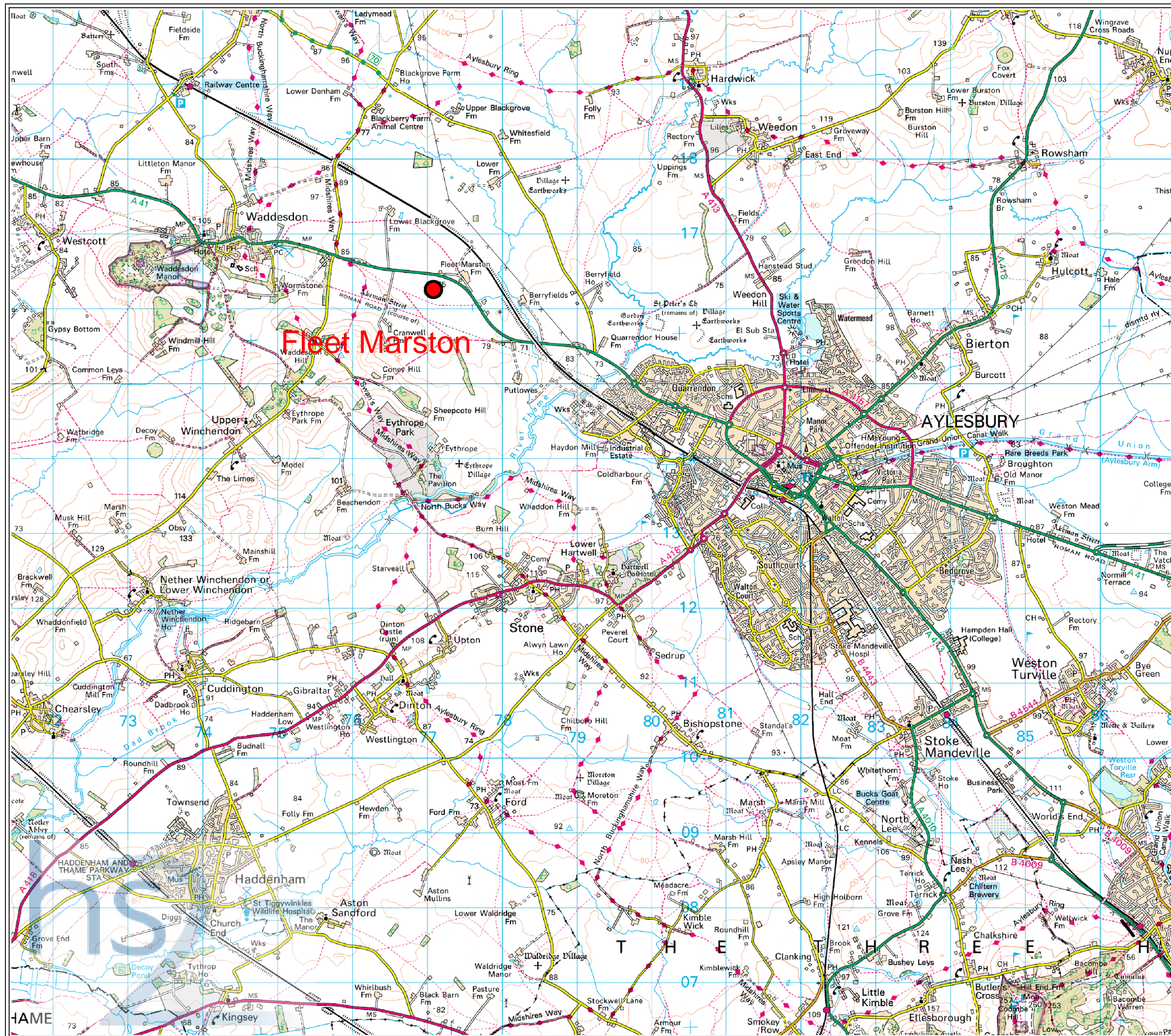
KB0AD (B) - Tie-in Diagram

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CH-004-11.61





 Site Locations

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Project: G1317/12 HS2: C252 Country South  
CFA11 KB0AD (C) Fleet Marston

Title: KB0AD(C) Site Location Diagram

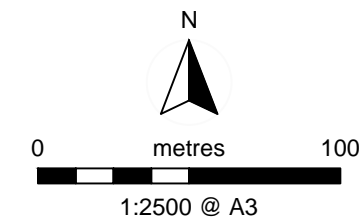
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**Project:** G1317/12 HS2: C252 Country South  
CFA11 KB0AD (C) Fleet Marston

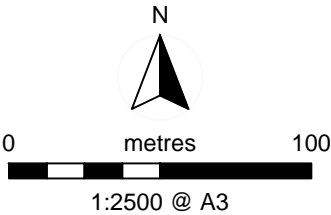
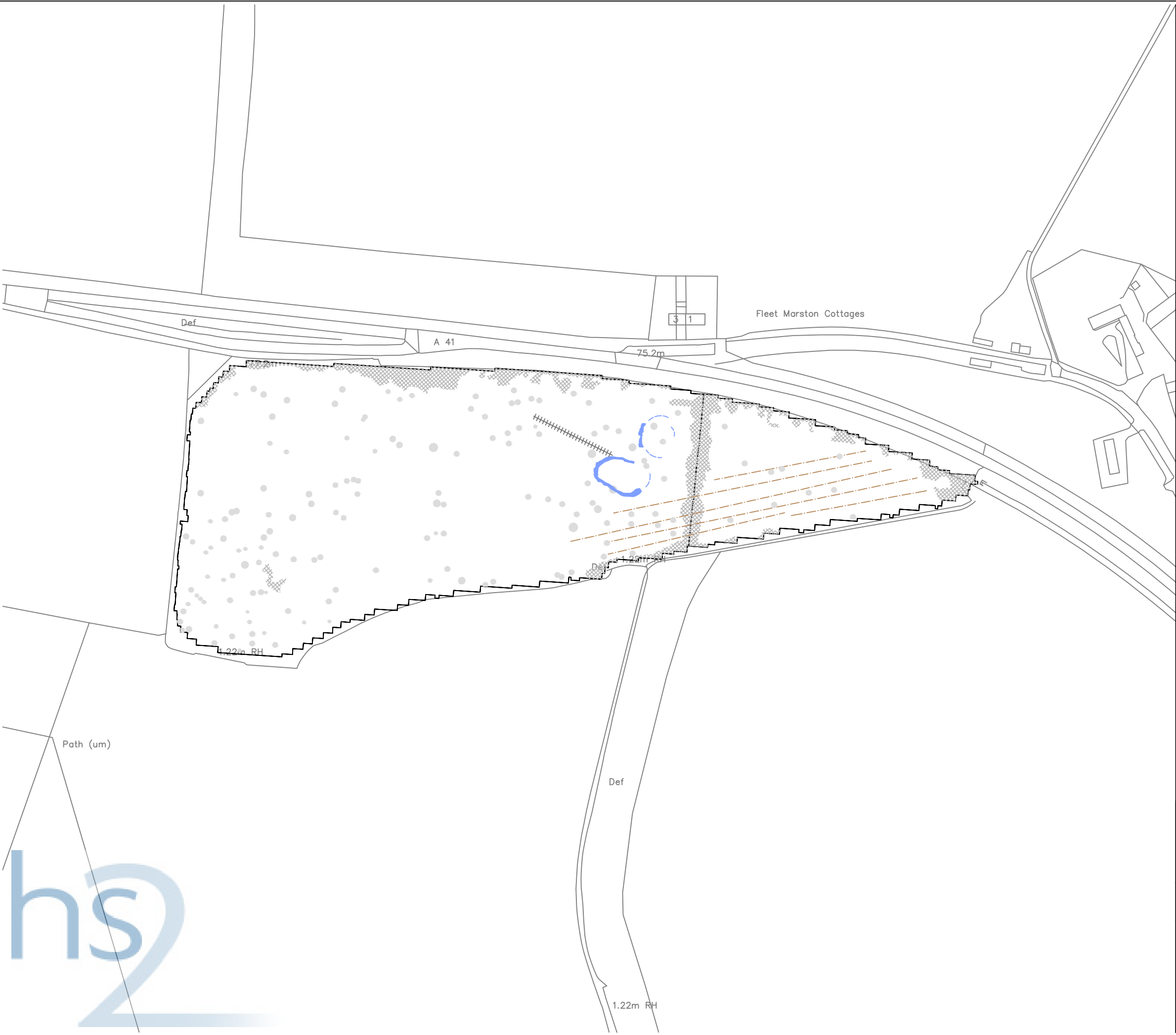
**Title:** KB0AD (C) Magnetometer Survey -  
Greyscale Plot





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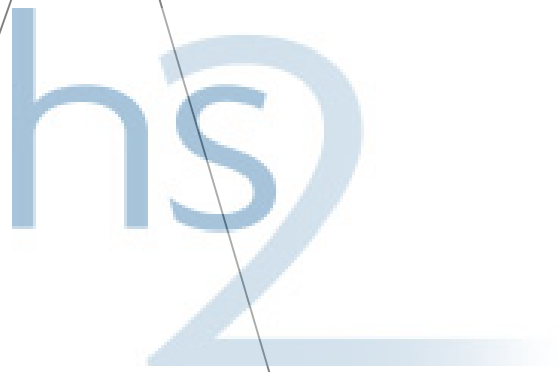
Drawn by: ELWood


**CH-004-11.64**



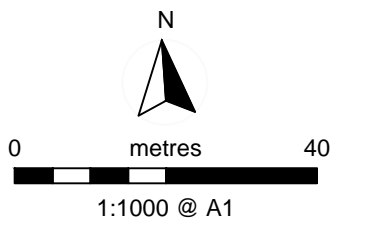
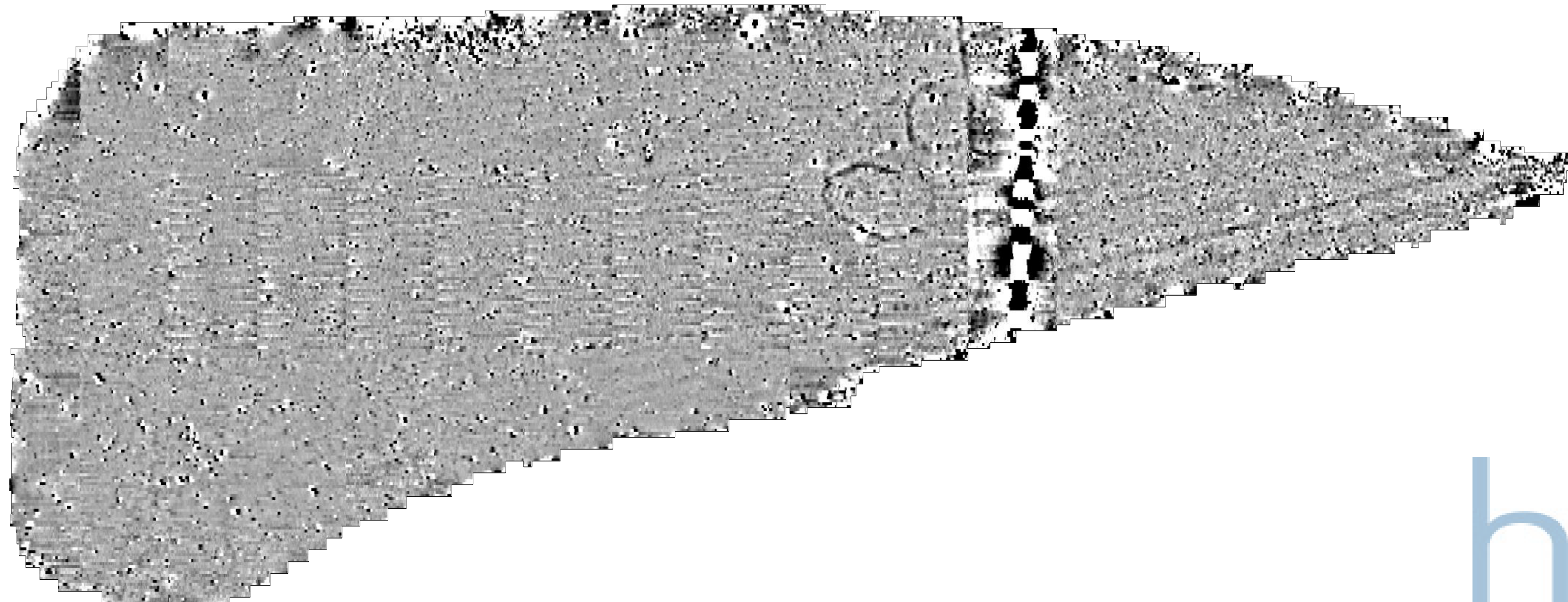
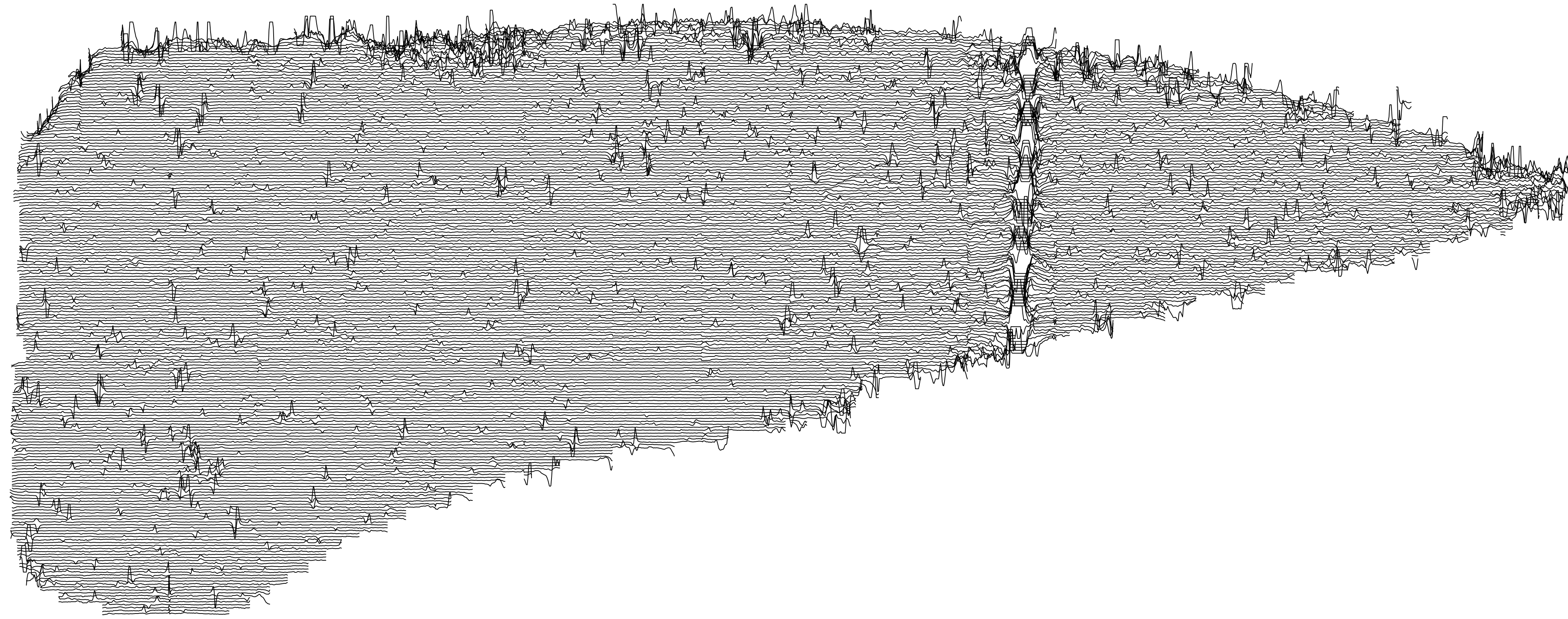


-  Possible Archaeology (discrete / trend)
-  Agricultural (Ridge and Furrow)
-  Agricultural (?Field Drains)
-  Ferrous (discrete anomaly / zone / pipe)

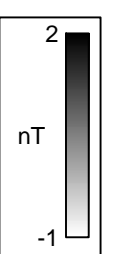


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<b>Project:</b> G1317/12 HS2: C252 Country South CFA11 KB0AD (C) Fleet Marston		
<b>Title:</b> KB0AD (C) Magnetometer Survey - Interpretation Plot		
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Drawn by: ELWood		<b>CH-004-11.65</b>



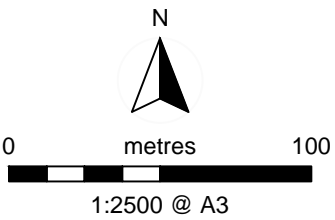




15 nT  
Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT



hs2





-  GPS Point
-  30m Grid Division

Point	Eastings	Northings
1	476867.670	216441.572
2	476863.678	216381.705
3	477226.872	216417.621
4	477222.880	216357.754

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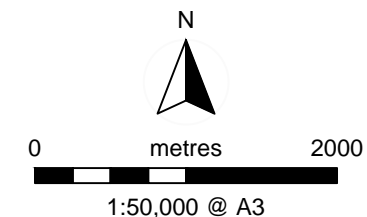
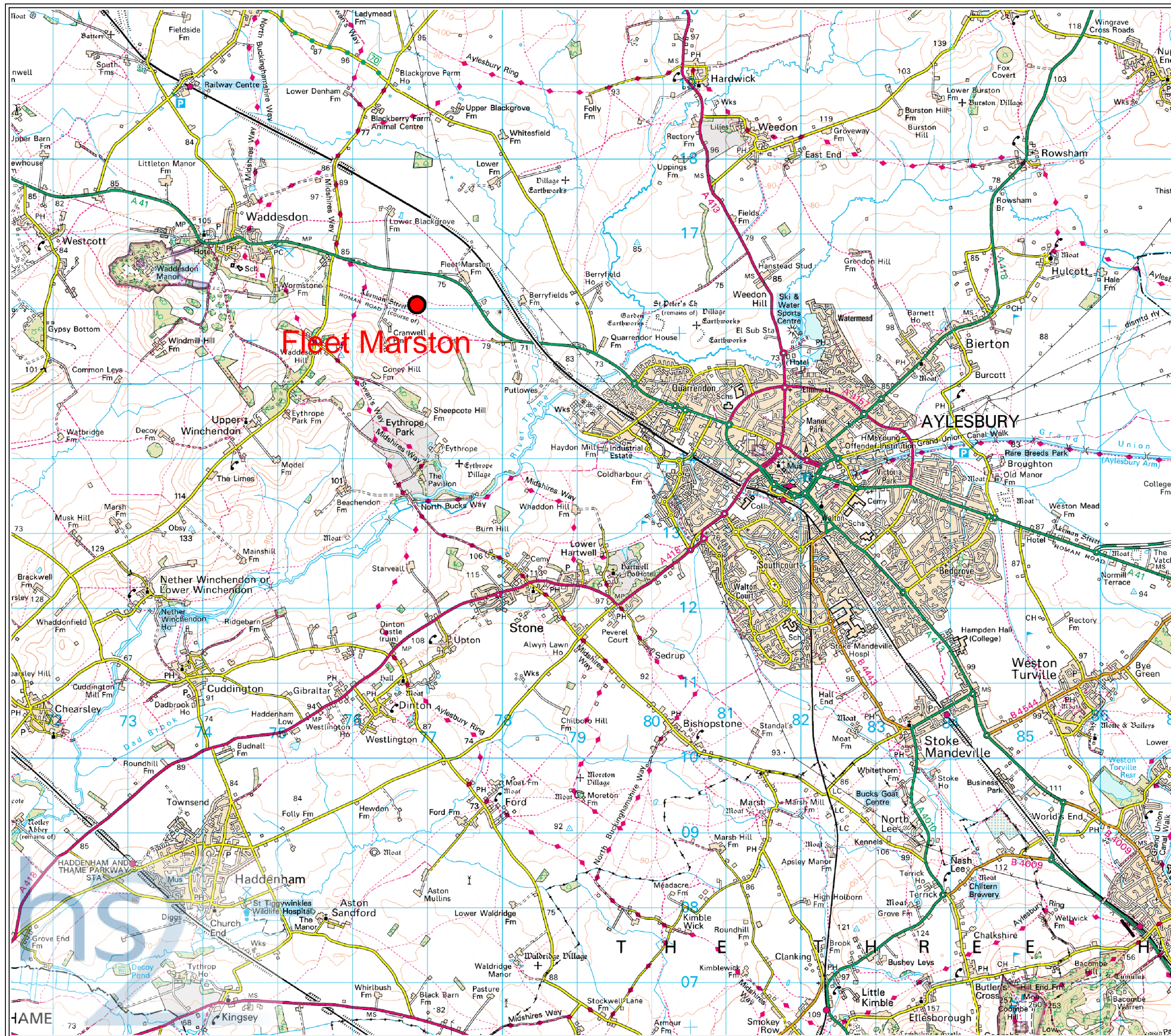
**Project:** G1317/12 HS2: C252 Country South  
CFA11 KB0AD (C) Fleet Marston

**Title:** KB0AD (C) - Tie-in Information

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Project: G1317/1 HS2: C252 Country South  
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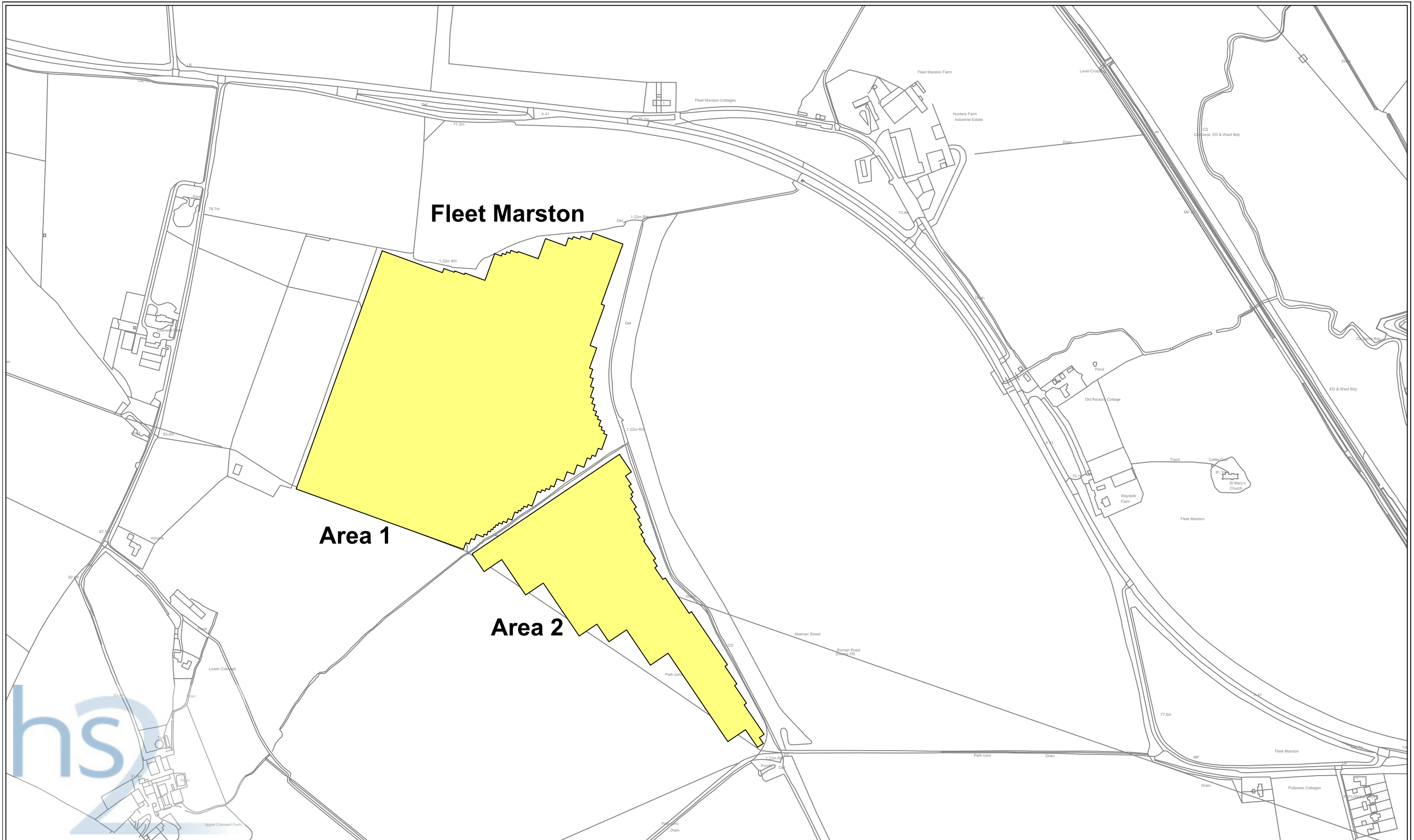
Title: KB0AD(D) Site Location Diagram

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Drawn by: JMT

CH-004-11.68





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0 metres 200

1:5000 @ A3



Area of Detailed Magnetometer Survey

**Project:** G1317/1 HS2: C252 Country South  
CFA11 KB0AD (D) Fleet Marston

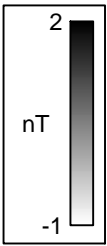
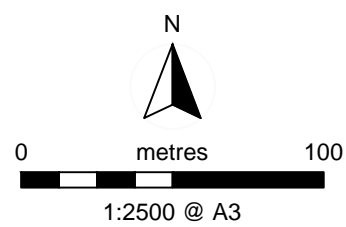
**Title:** KB0AD(D) Location of Survey Areas

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Drawn by: GA

**CH-004-11.69**





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**Project:** G1317/1 HS2: C252 Country South  
CFA11 KB0AD(D) Fleet Marston

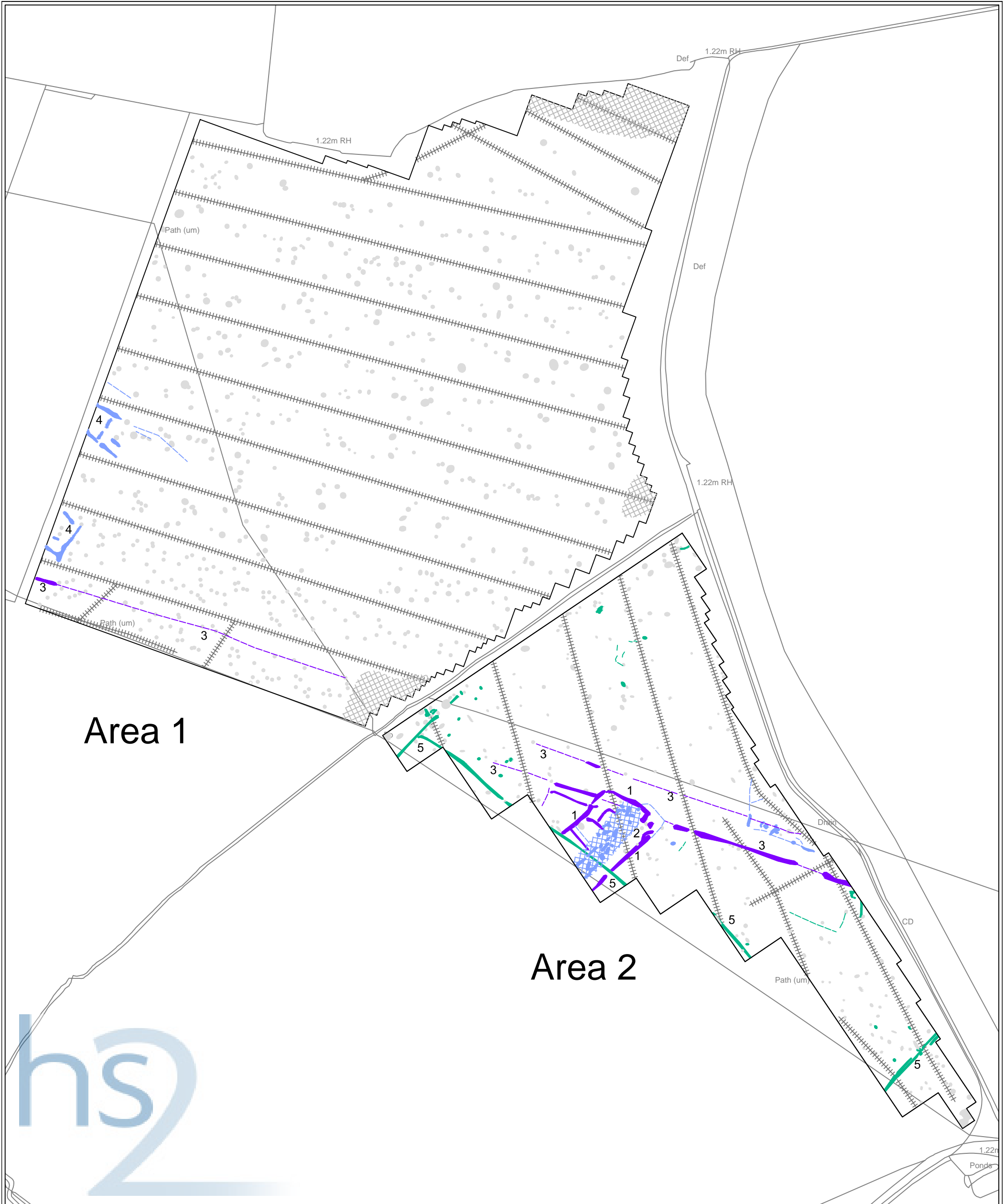
**Title:** KB0AD(D) Magnetometer Survey -  
Greyscale Plot

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Drawn by: GA/JMT

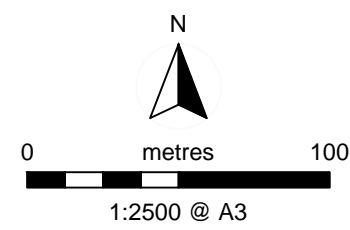
CH-004-11.70










Area 1

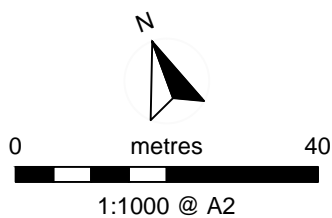
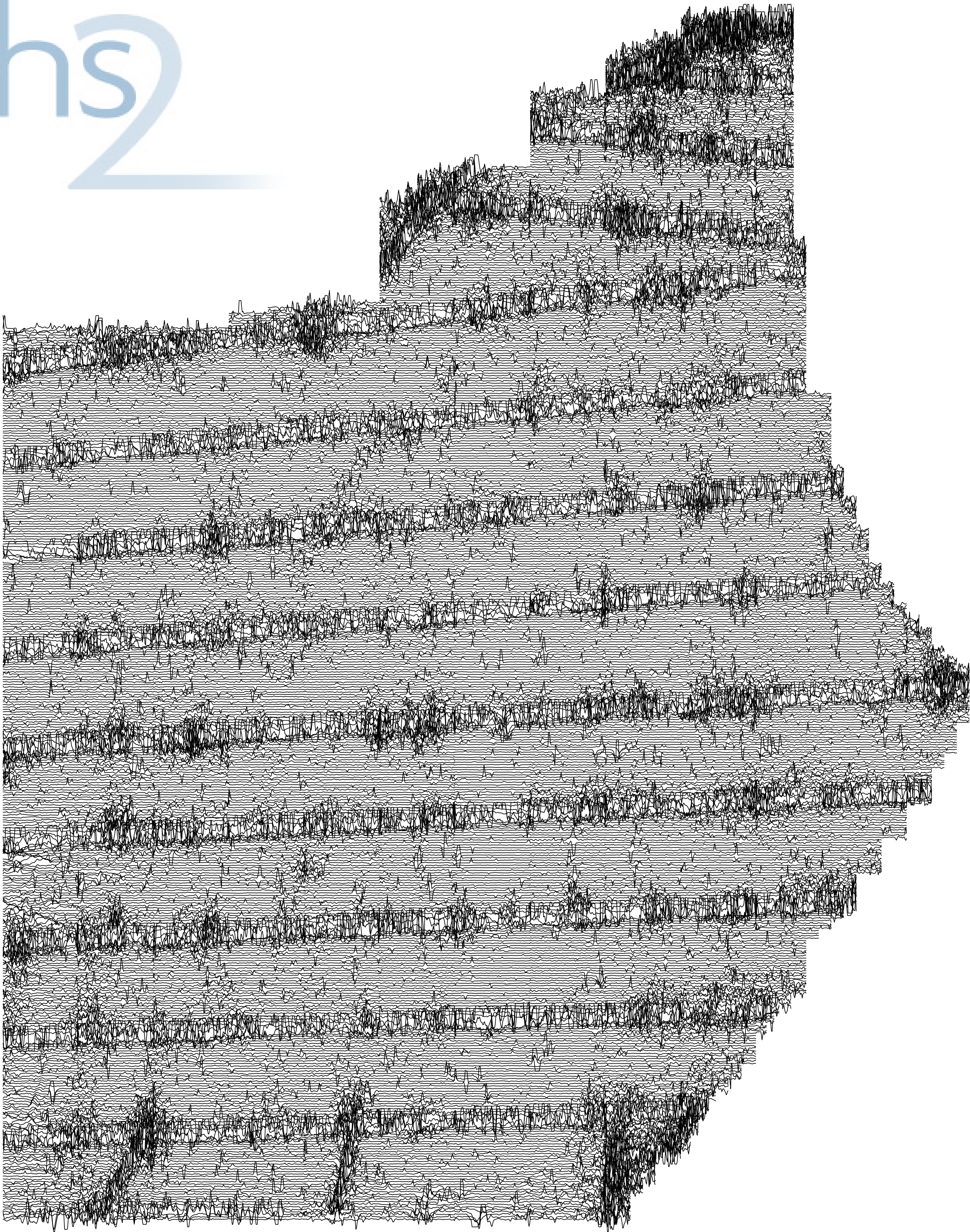
Area 2




-  Archaeology (discrete anomaly / trend)
-  Possible Archaeology (discrete anomaly / zone / trend)
-  Uncertain Origin (discrete anomaly / trend)
-  Modern - Ferrous (discrete anomaly / zone / Drain)

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<p><b>Project:</b> G1317/1 HS2: C252 Country South CFA11 KBOAD(D) Fleet Marston</p>	
<p><b>Title:</b> KB0AD(D) Magnetometer Survey Interpretation</p>	
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<p>Drawn by: GA/JMT</p>	<p><b>CH-004-11.71</b></p>

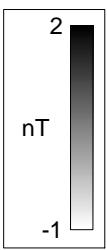
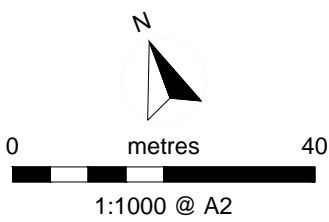





15 nT  
Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT

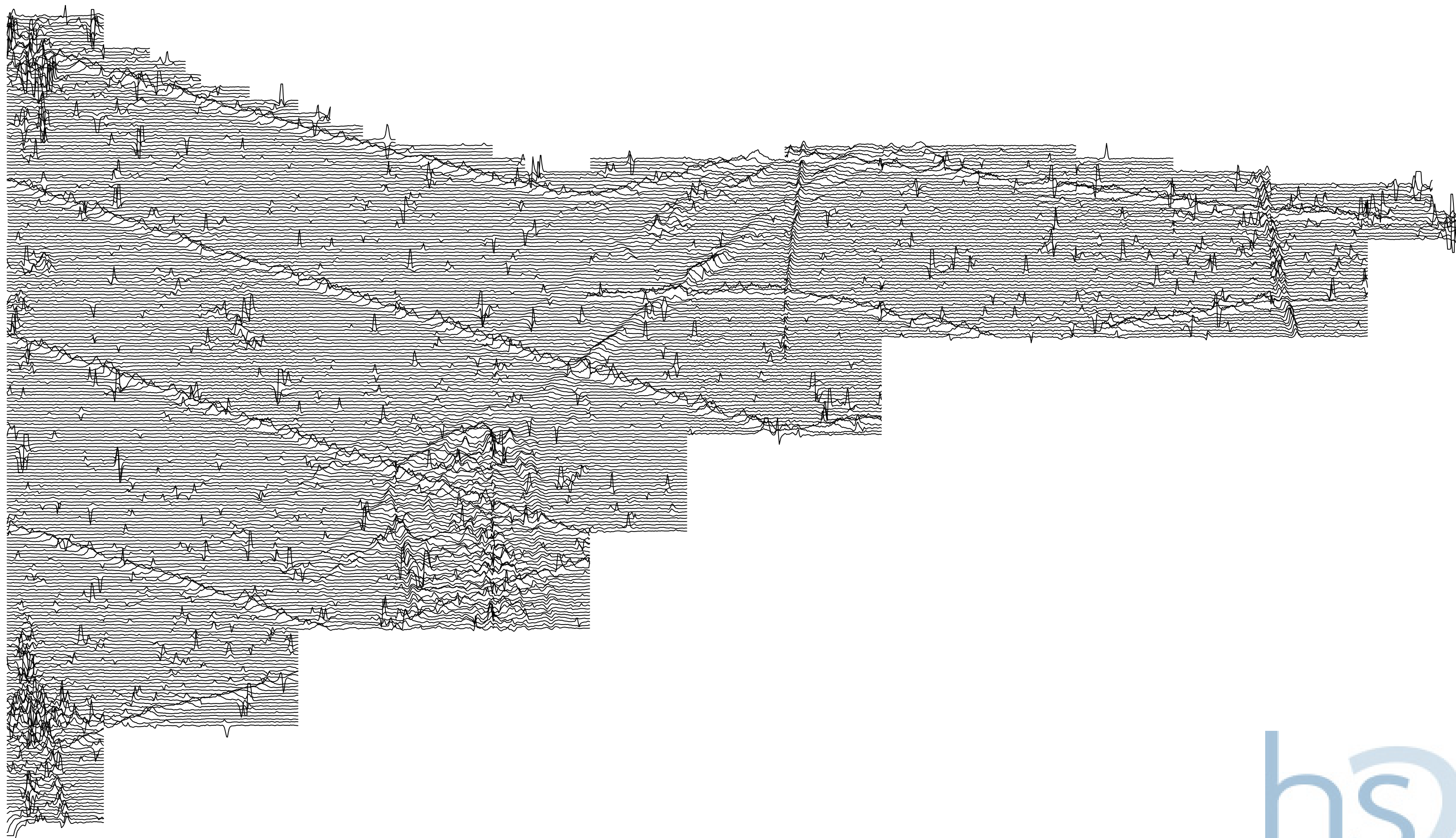
<div>GSB Prospection Ltd Cowburn Farm, 21 Market Street Thornton Bradford BD13 3HW +44 (0)1274 835016</div> <div></div>	
<b>Project:</b> G1317/1 HS2:C252 Country South CFA11 KB0AD(D) Fleet Marston	
<b>Title:</b> Magnetic Data - Area 1: XY Trace Plot	
Drawn by: JMT	CH-004-11.72



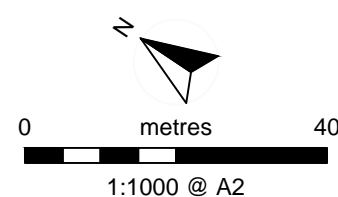


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<b>Project:</b> G1317/1 HS2:C252 Country South CFA11 KB0AD(D) Fleet Marston	
<b>Title:</b> Magnetic Data - Area 1: Greyscale Plot	
Drawn by: JMT	CH-004-11.73





hs2



15 nT

Y axis plot scale: 15nT/cm  
Clip levels: +/-15nT

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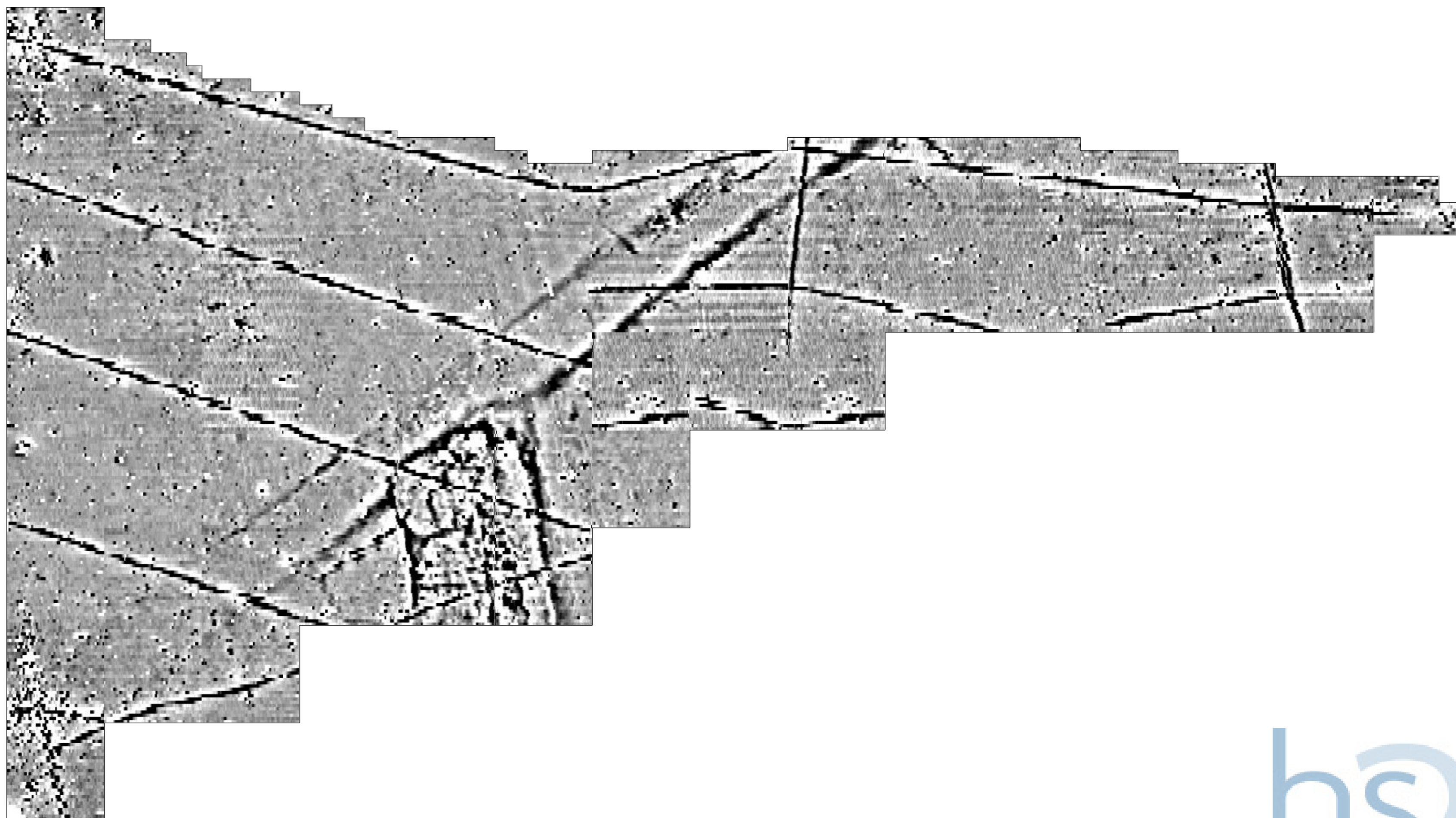
**Project:** G1317/1 HS2: C252 Country South  
CFA11 KB0AD(D) Fleet Marston

**Title:** Magnetic Data - Area 2:  
XY Trace Plot

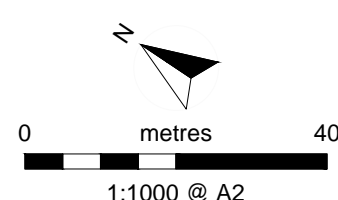
Drawn by: JMT


CH-004-11.74



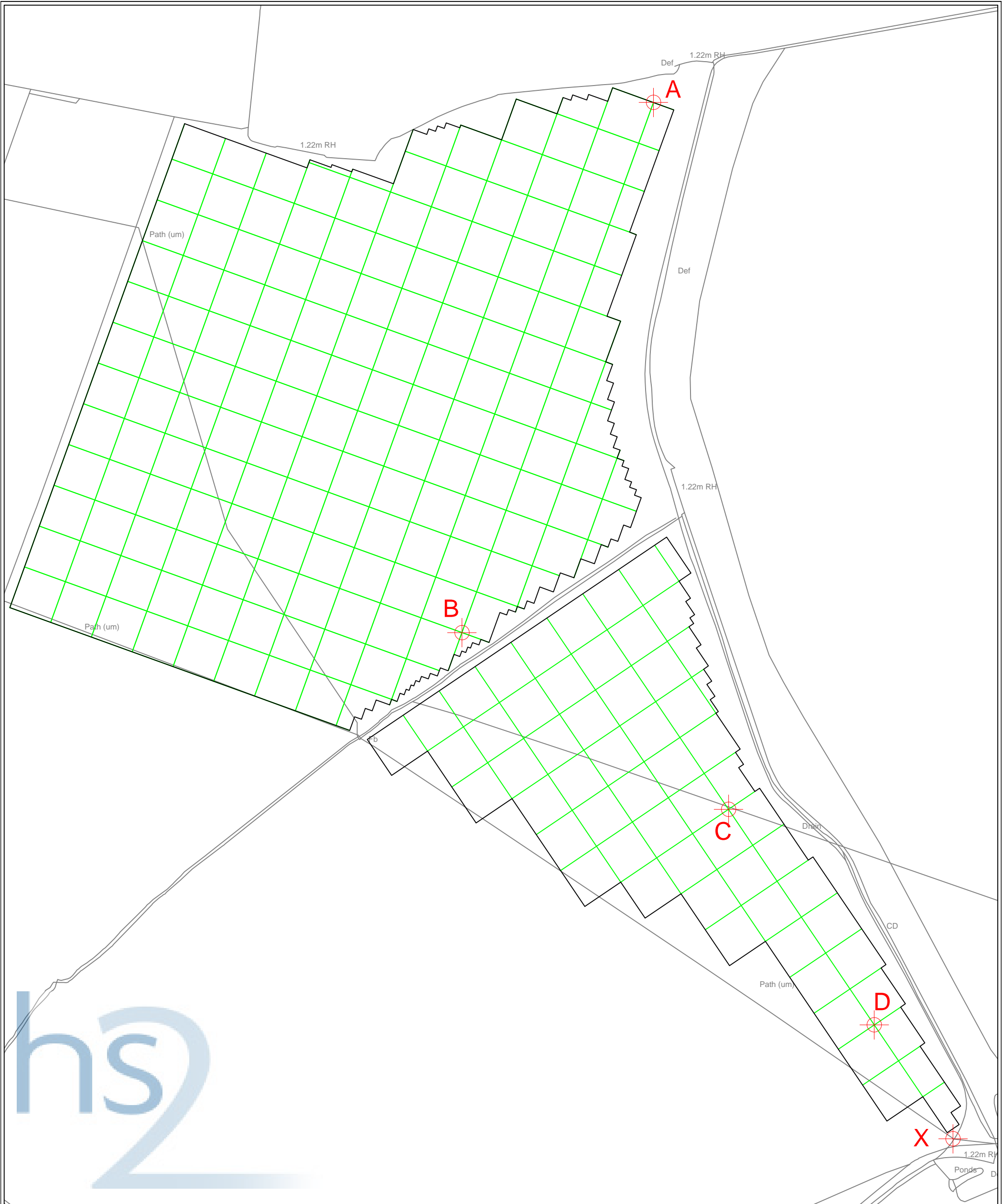



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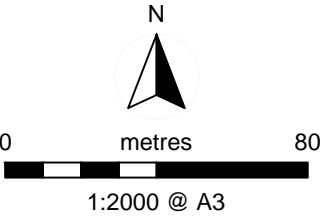


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<b>Project:</b> G1317/1 HS2: C252 Country South CFA11 KB0AD(D) Fleet Marston		
<b>Title:</b> Magnetic Data - Area 2: Greyscale Plot		
Drawn by: JMT		<b>CH-004-11.7</b>





 Survey area showing 30m grid subdivisions



Point	Easting	Northing	Description
A	477108.937	216295.203	Grid node, Area 1
B	476976.151	215928.551	Grid node, Area 1
C	477160.923	213806.195	Grid node, Area 2
D	477261.644	215657.123	Grid node, Area 2
X	477316.190	215578.142	Footpath sign

The above co-ordinates are uncorrected RTK measurements. If reconstructing the grid using GPS, recorded map detail point X must be used as a calibration point.

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**Project:** G1317/1 HS2: C252 Country South  
CFA11 KB0AD(D)

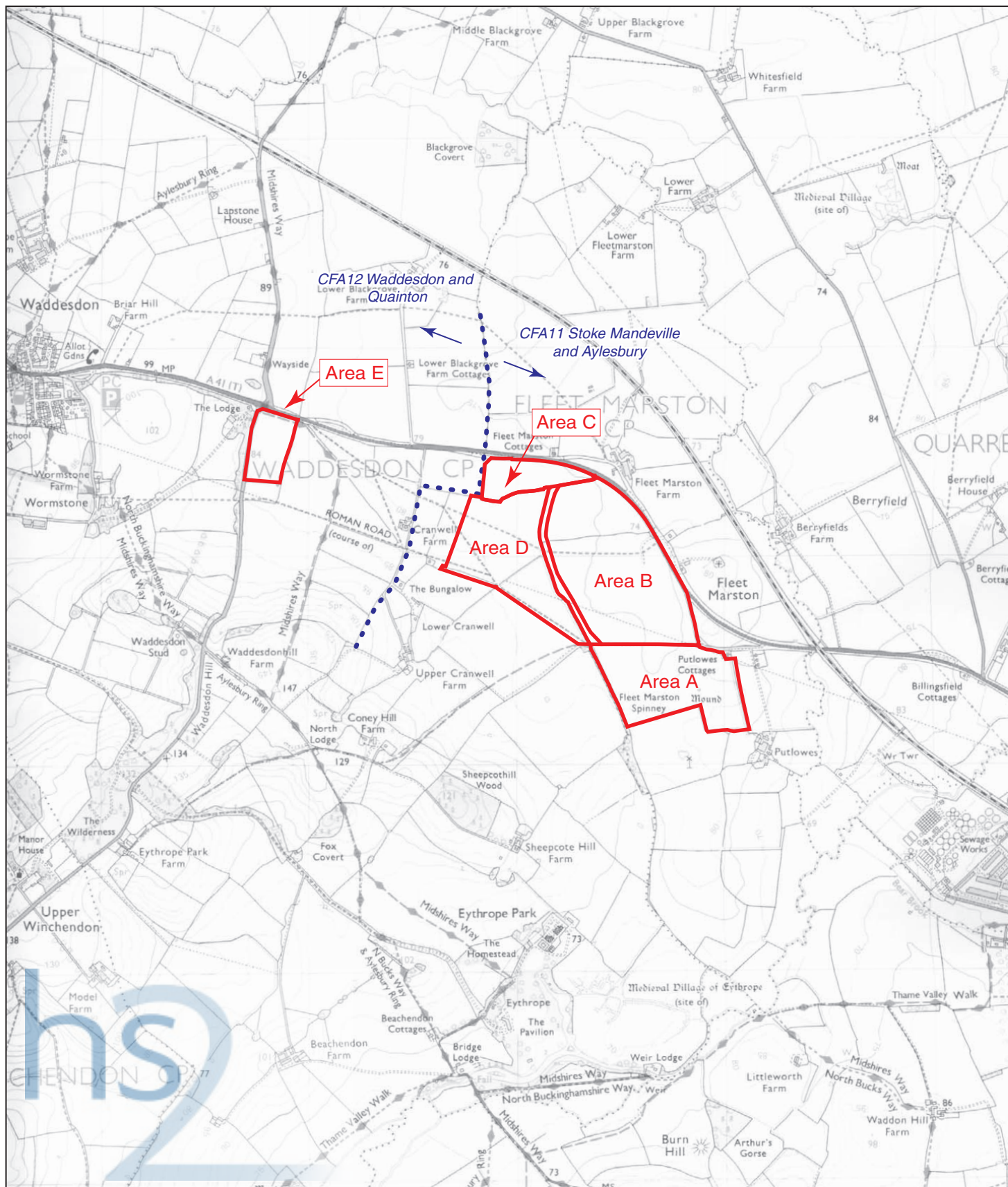
**Title:** Tie - In Diagram

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Drawn by: GA/JMT

CH-004-11.76





..... Community Forum boundary (CFA)

0 1km

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[enquiries@cotswoldarchaeology.co.uk](mailto:enquiries@cotswoldarchaeology.co.uk)

**PROJECT TITLE**

Site KB0AD (A - D): Land near Fleet Marston Farm, Buckinghamshire

**FIGURE TITLE**

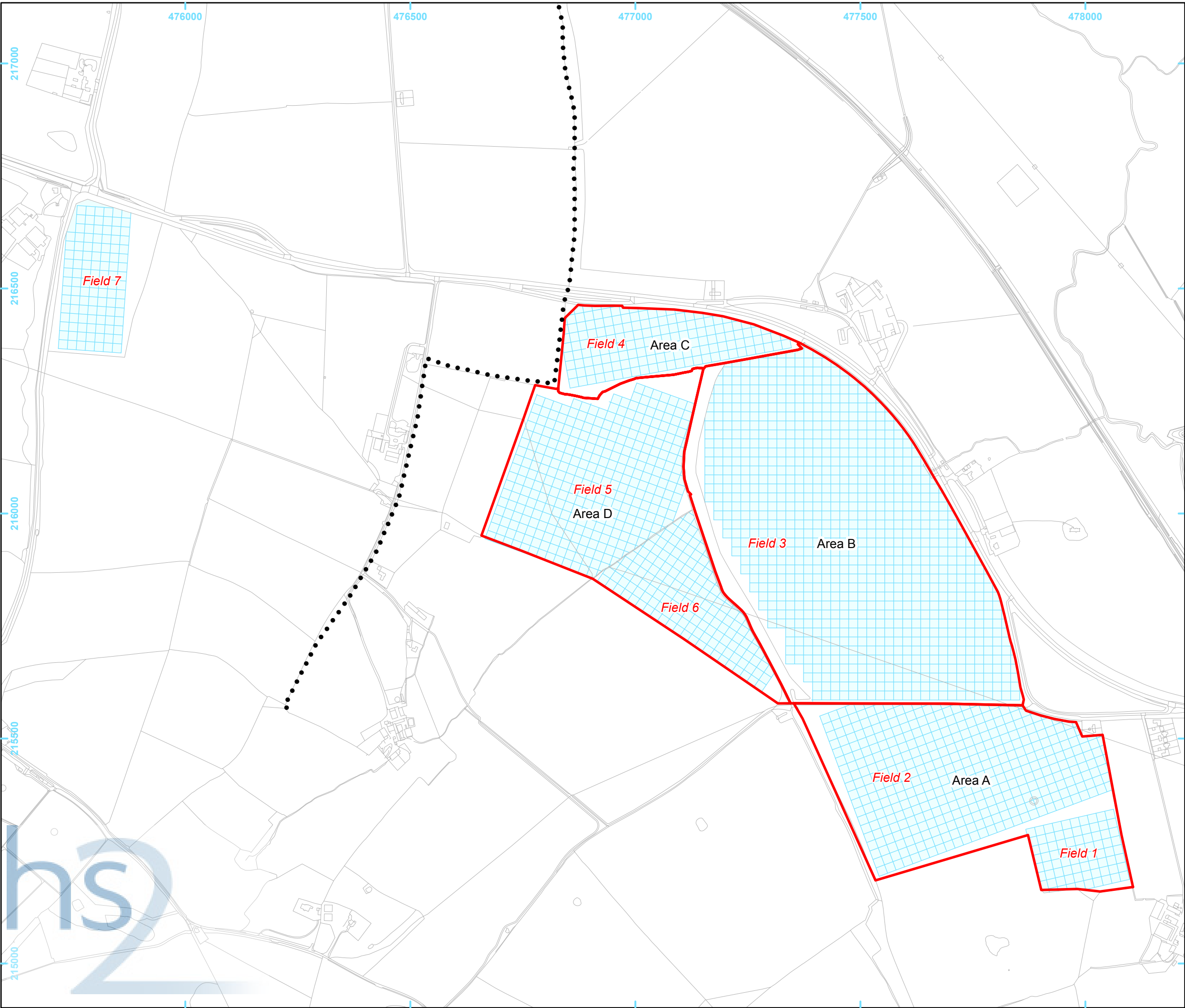
**KBOAD: Fieldwalking Survey.  
Site location plan**

PROJECT NO. 660122 DATE 25-09-2013  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A4 1:25,000

FIGURE NO.

**CH-004-11.77**





- site
- areas subject to fieldwalking
- transect lines
- CFA



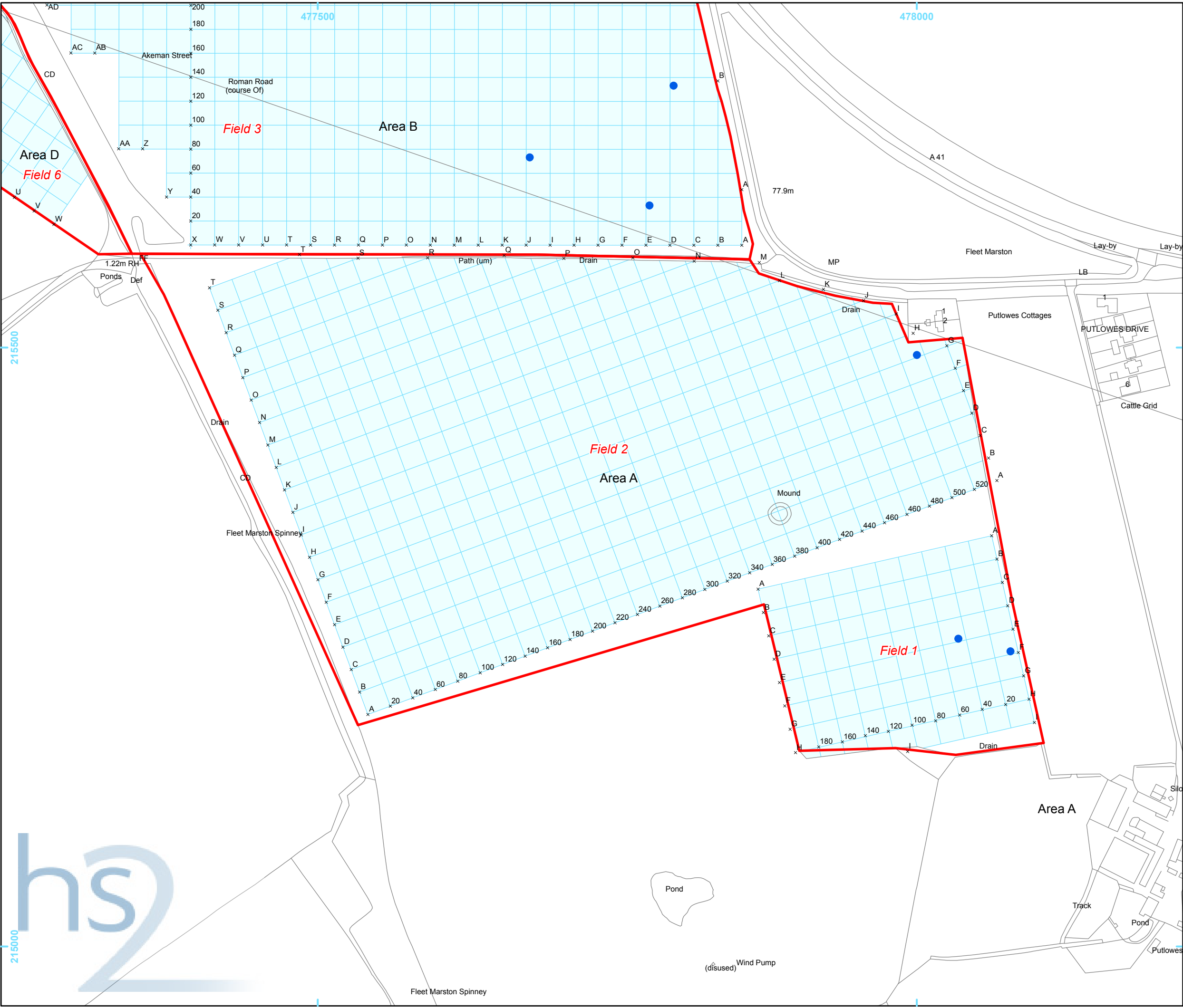
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PROJECT TITLE			
Site KBOAD (A - D): Land near Fleet Marston Farm, Buckinghamshire			
FIGURE TITLE			
KBOAD: Fieldwalking Survey. The site, showing survey fields and areas			
PROJECT NO.	660122	DATE	25-09-2013
DRAWN BY	JB	REVISION	00
APPROVED BY	PJM	SCALE@A3	1:8,000
			FIGURE NO. CH-004-11.78





- site
- areas subject to fieldwalking
- transect lines

Flint flake - count

1

Prehistoric pottery - count

1

2



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PROJECT TITLE  
Site KBOAD (A - D): Land near Fleet Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking Survey.  
Prehistoric finds

PROJECT NO. 660122 DATE 25-09-2013 FIGURE NO.  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:3,000 CH-004-11.79









- site
- areas subject to fieldwalking
- transect lines

- Flint flake - count
- 1
- Prehistoric pottery - count
- 1
  - 2



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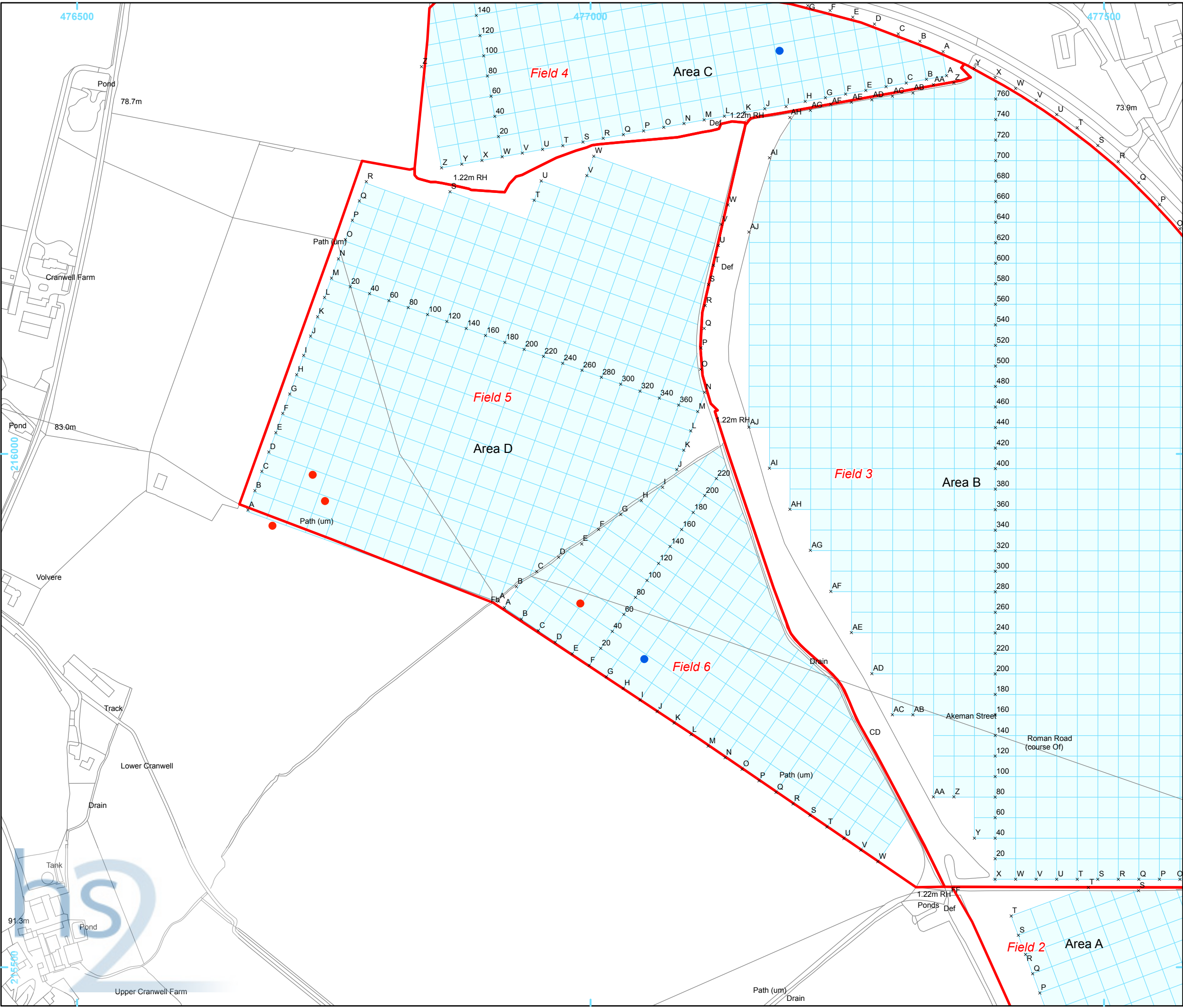
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enquiries@cotswoldarchaeology.co.uk

**PROJECT TITLE**  
Site KBOAD (A - D): Land near Fleet Marston Farm, Buckinghamshire

**FIGURE TITLE**  
KBOAD:Fieldwalking Survey  
Prehistoric finds

PROJECT NO. 660122 DATE 25-09-2013  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:2,000 **CH-004-11.81**





- site
- areas subject to fieldwalking
- transect lines

Flint flake - count

1

Prehistoric pottery - count

1

2



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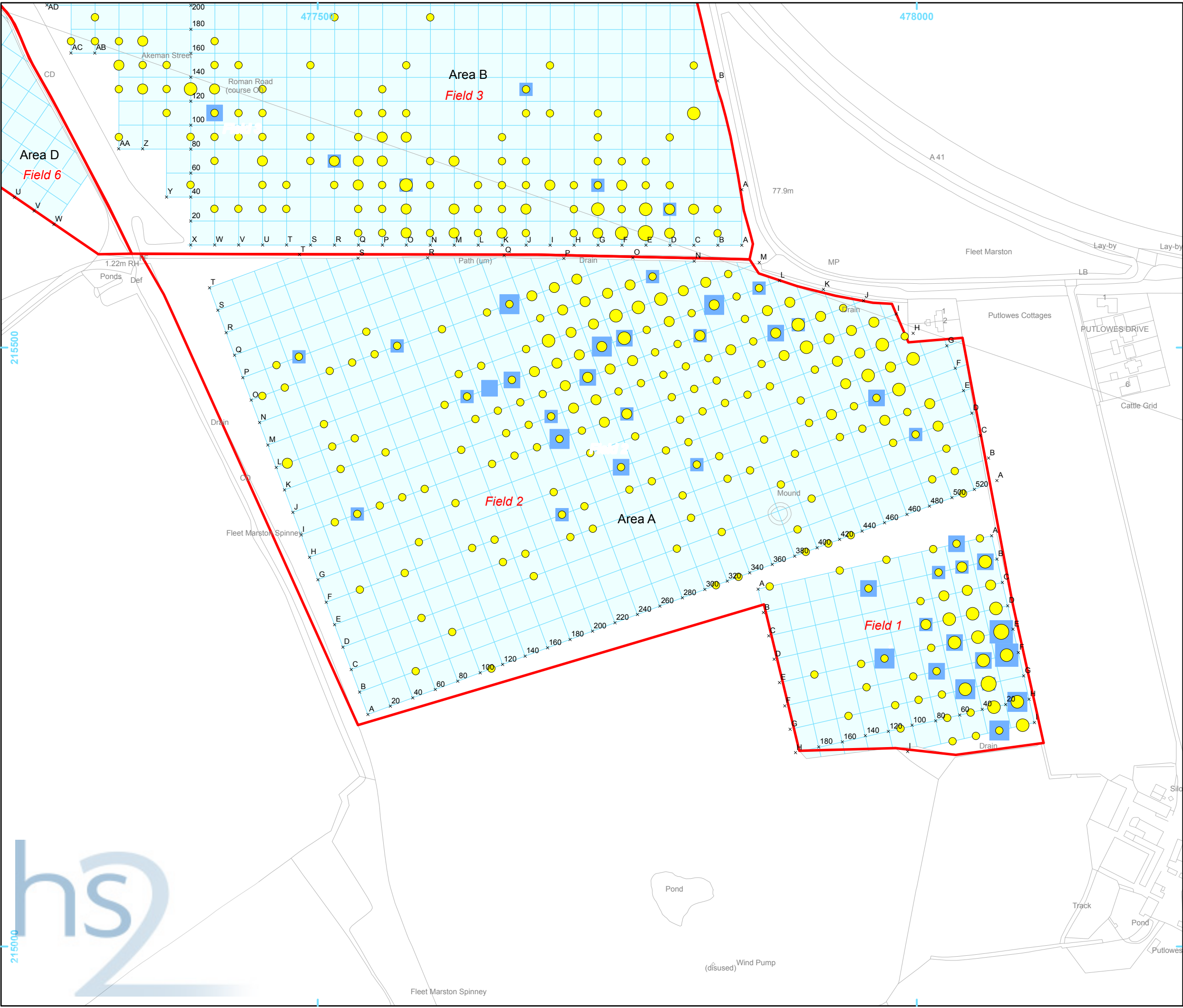
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PROJECT TITLE  
Site KB0AD (A - D): Land near Fleet  
Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking Survey  
Prehistoric finds

PROJECT NO. 660122	DATE 25-09-2013	FIGURE NO.
DRAWN BY JB	REVISION 00	
APPROVED BY PJM	SCALE@A3 1:3,500	CH-004-11.82





- site
- areas subject to fieldwalking
- transect lines

Roman pottery - count

- 1 - 5
- 6 - 13
- 14 - 28
- 29 - 91

Roman cbm - weight (g)

- 2 - 21
- 22 - 47
- 48 - 113
- 114 - 326



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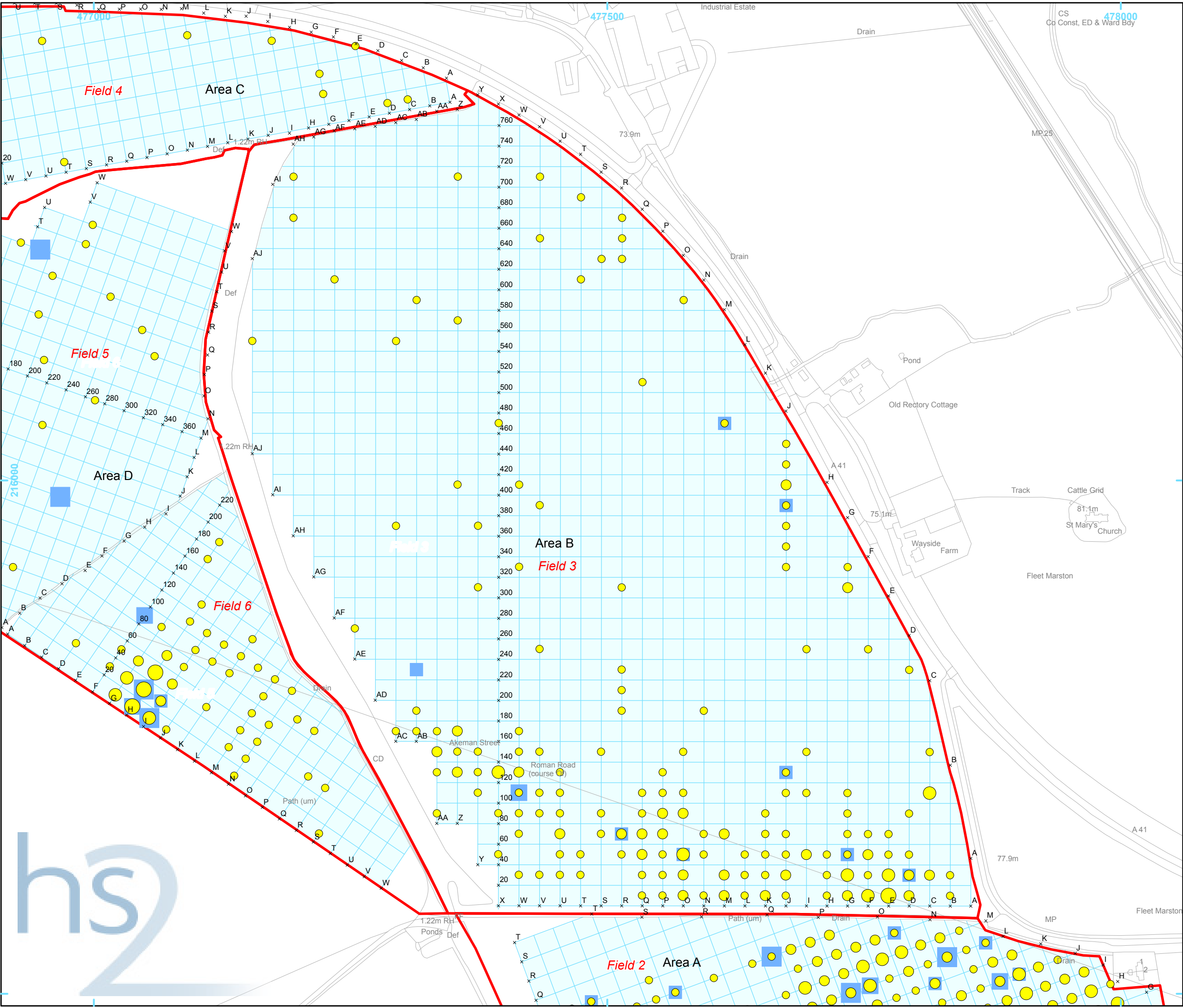
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PROJECT TITLE  
Site KBOAD (A-D): Land near Fleet Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking Sur vey.  
Roman finds

PROJECT NO. 660122 DATE 25-09-2013 FIGURE NO.  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:3,000 CH-004-11.83





- site
- areas subject to fieldwalking
- transect lines

Roman pottery - count

- 1 - 5
- 6 - 13
- 14 - 28
- 29 - 91

Roman cbm - weight (g)

- 2 - 21
- 22 - 47
- 48 - 113
- 114 - 326



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PROJECT TITLE  
Site KB0AD (A-D): Land near Fleet Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking Survey.  
Roman finds

PROJECT NO. 660122 DATE 25-09-2013  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:3,500

FIGURE NO.  
CH-004-11.84



hs2

477000

216500



- site
- areas subject to fieldwalking
- transect lines

Roman pottery - count

- 1 - 5
- 6 - 13
- 14 - 28
- 29 - 91

Roman cbm - weight (g)

- 2 - 21
- 22 - 47
- 48 - 113
- 114 - 326



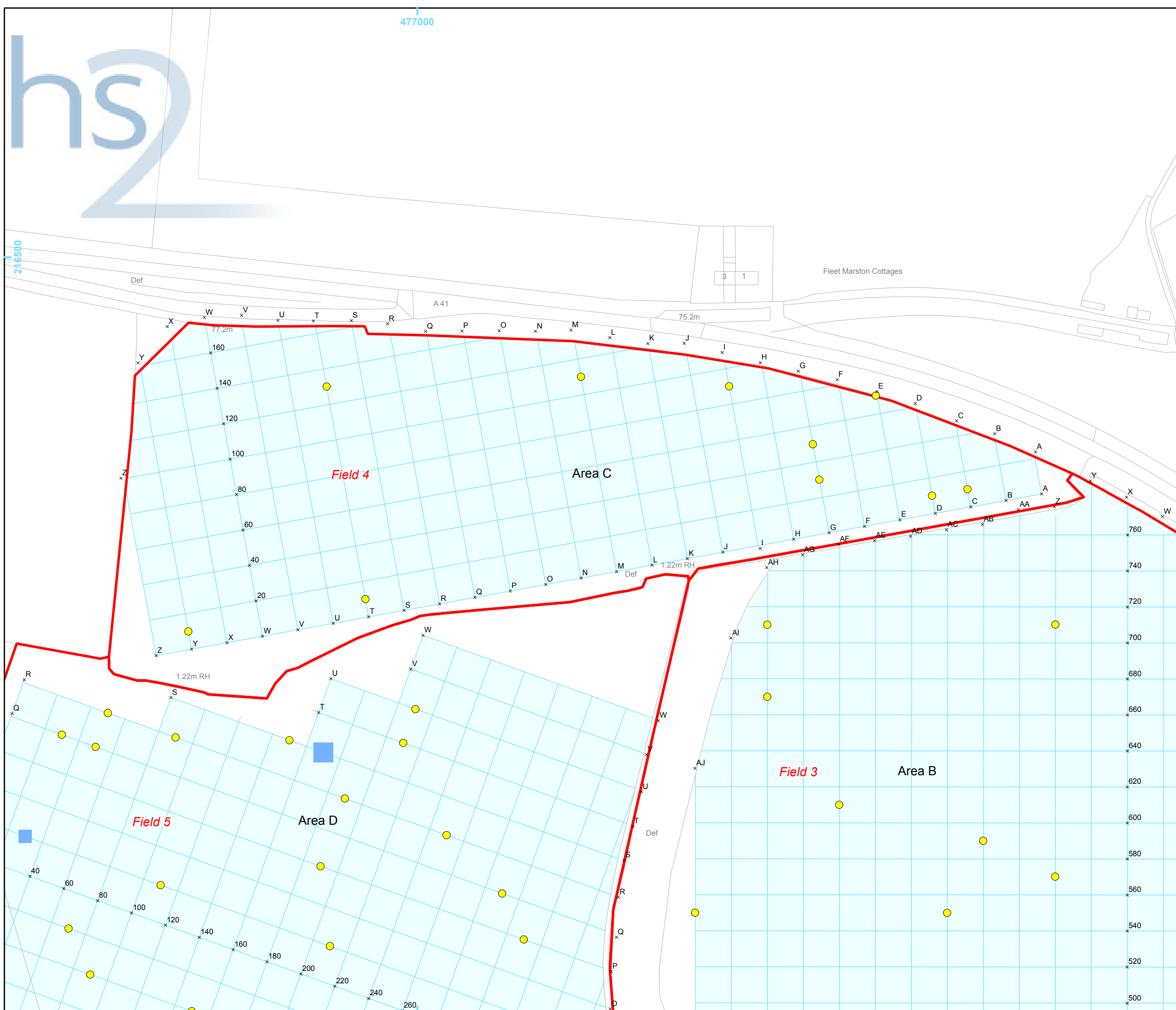
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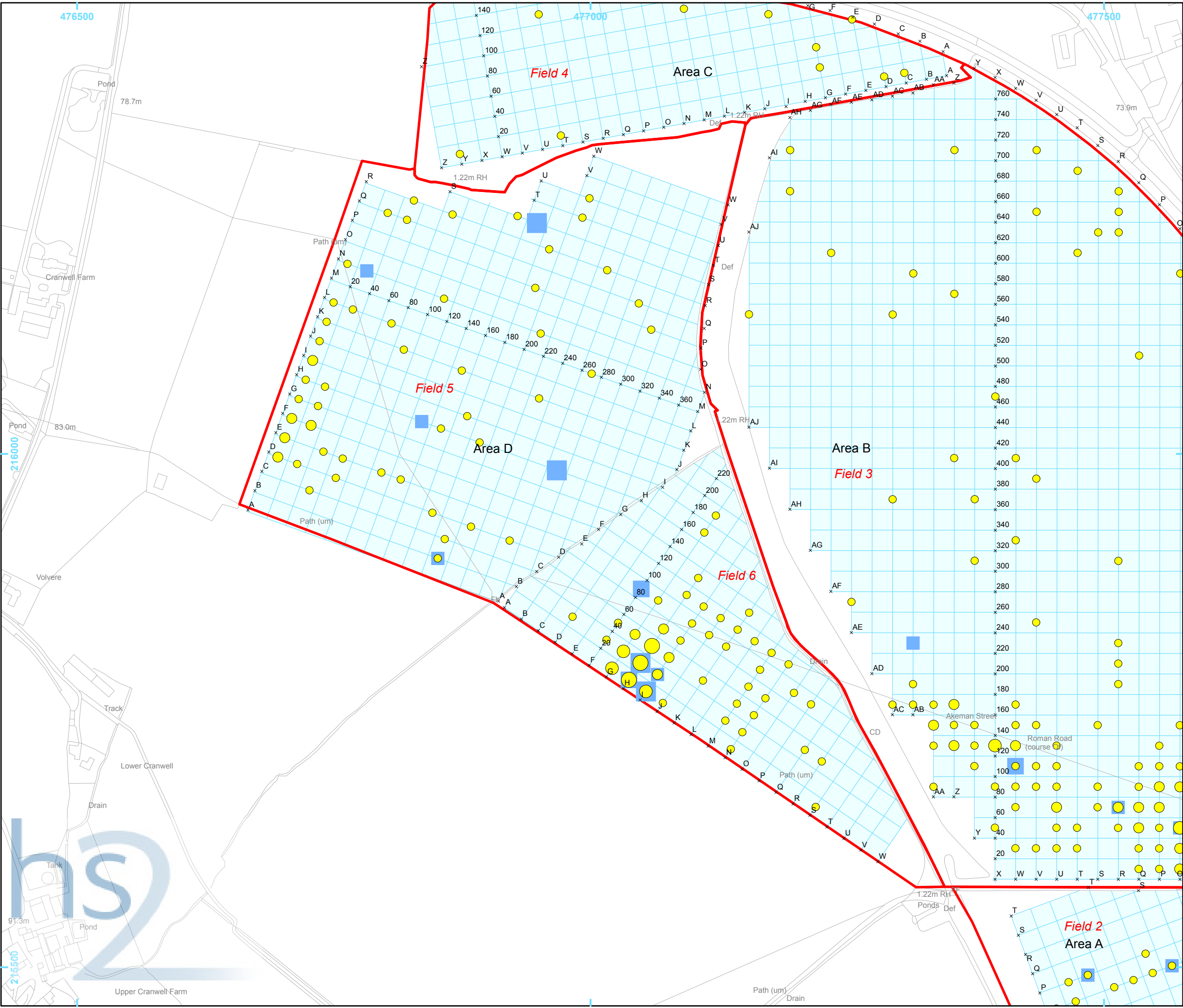
PROJECT TITLE  
Site KBOAD (A-D): Land near Fleet  
Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking survey.  
Roman finds

PROJECT NO. 660122 DATE 25-09-2013 FIGURE NO.  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:2,000 CH-004-11.85







- site
- areas subject to fieldwalking
- transect lines

Roman pottery - count

- 1 - 5
- 6 - 13
- 14 - 28
- 29 - 91

Roman cbm - weight (g)

- 2 - 21
- 22 - 47
- 48 - 113
- 114 - 326



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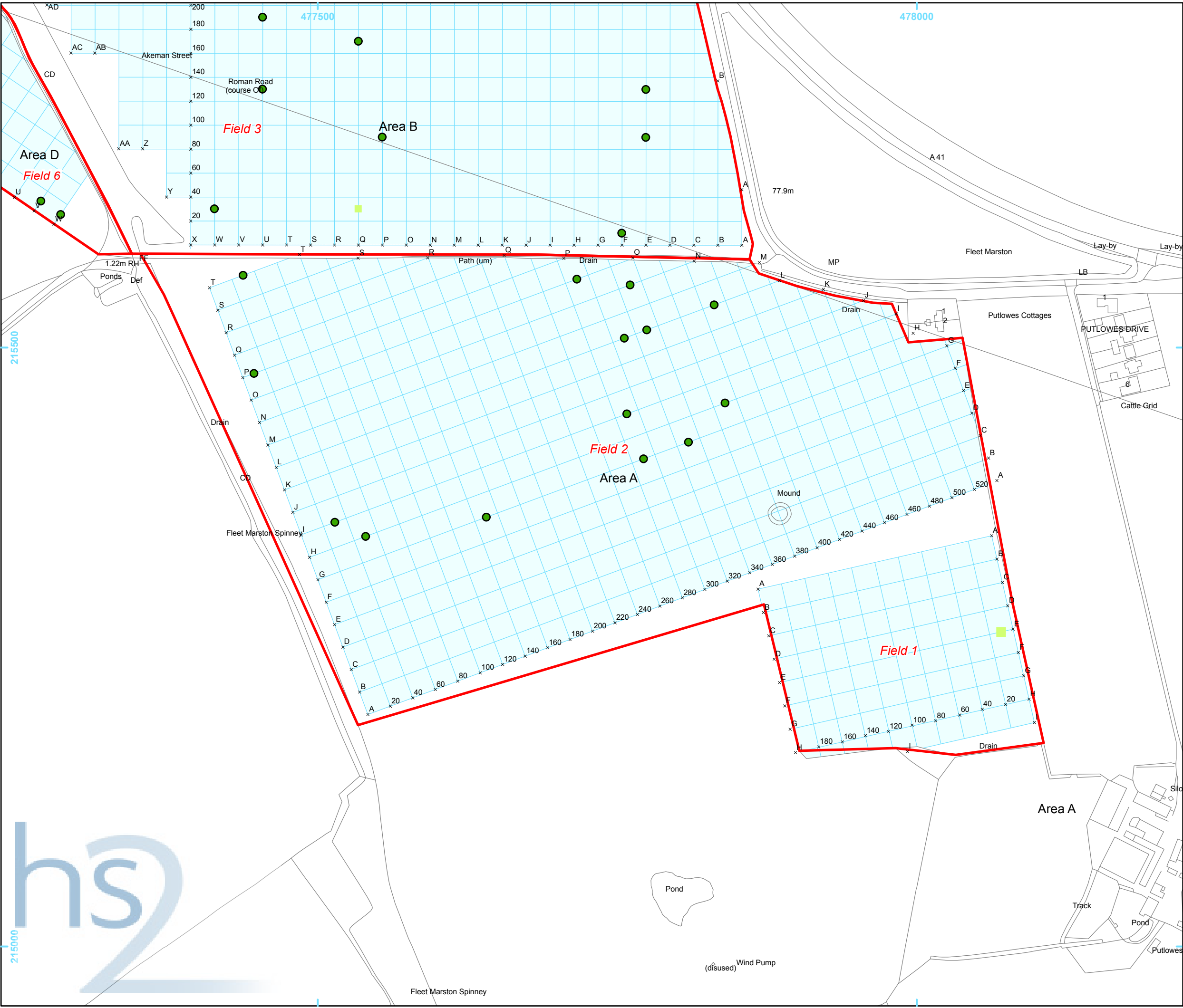
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PROJECT TITLE  
Site KB0AD (A-D): Land near Fleet  
Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking survey.  
Roman finds

PROJECT NO. 660122 DATE 25-09-2013  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:3,500 CH-004-11.86





- site
- areas subject to fieldwalking
- transect lines

medieval pottery - count

- 1 - 3
- 4 - 8

medieval cbm - weight (g)

- 4 - 15
- 16 - 25
- 26 - 40
- 41 - 97



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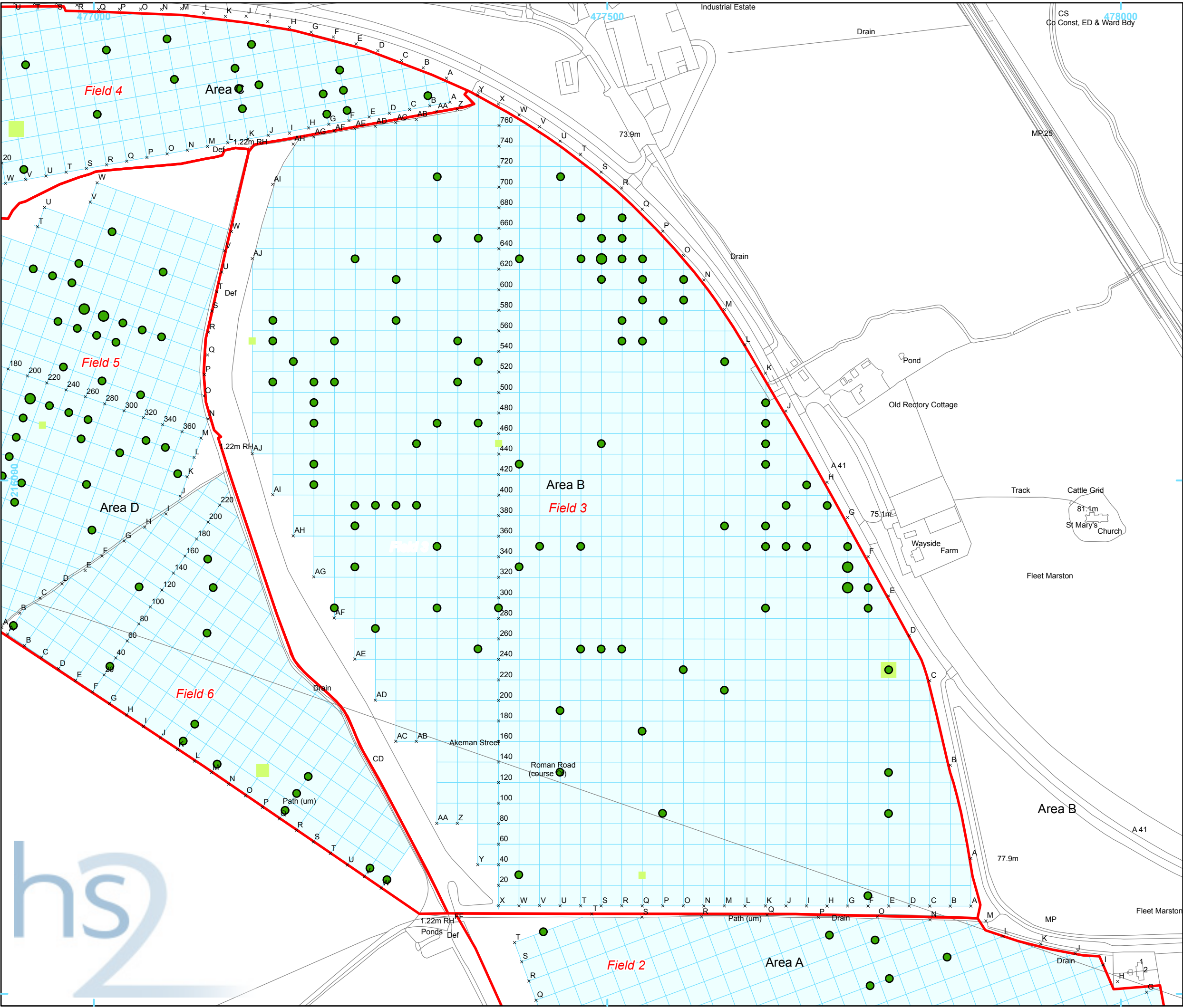
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PROJECT TITLE  
Site KBOAD (A-D): Land near Fleet Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking survey.  
Medieval finds

PROJECT NO. 660122	DATE 25-09-2013	FIGURE NO.
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APPROVED BY PJM	SCALE@A3 1:3,000	CH-004-11.87





- site
- areas subject to fieldwalking
- transect lines

medieval pottery - count

- 1 - 3
- 4 - 8

medieval cbm - weight (g)

- 4 - 15
- 16 - 25
- 26 - 40
- 41 - 97



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PROJECT TITLE  
Site KB0AD (A-D): Land near Fleet Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking survey.  
Medieval finds

PROJECT NO. 660122 DATE 25-09-2013  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:3,500 CH-004-11.88

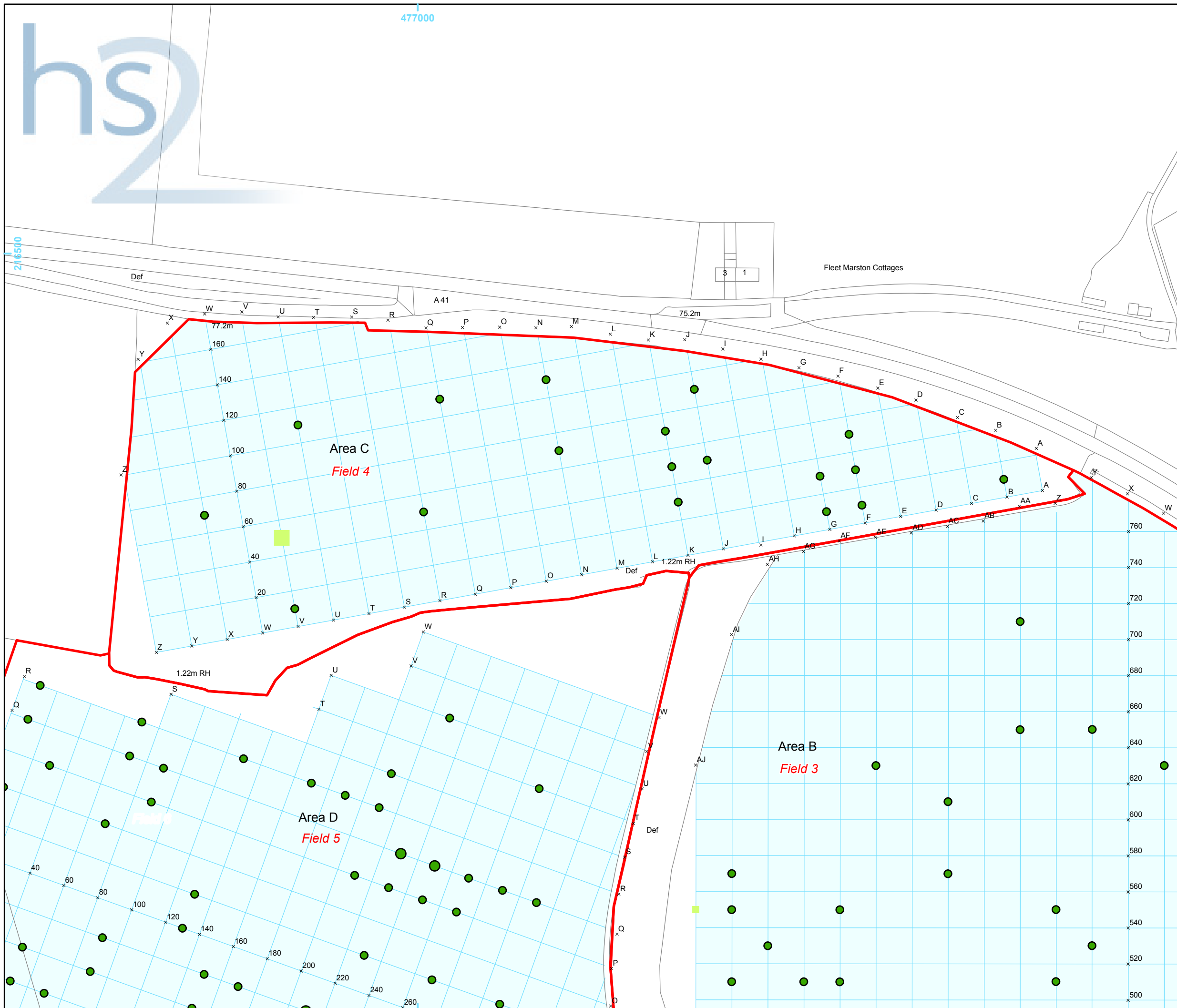




477000



216500



- site
- areas subject to fieldwalking
- transect lines

medieval pottery - count

- 1 - 3
- 4 - 8

medieval cbm - weight (g)

- 4 - 15
- 16 - 25
- 26 - 40
- 41 - 97



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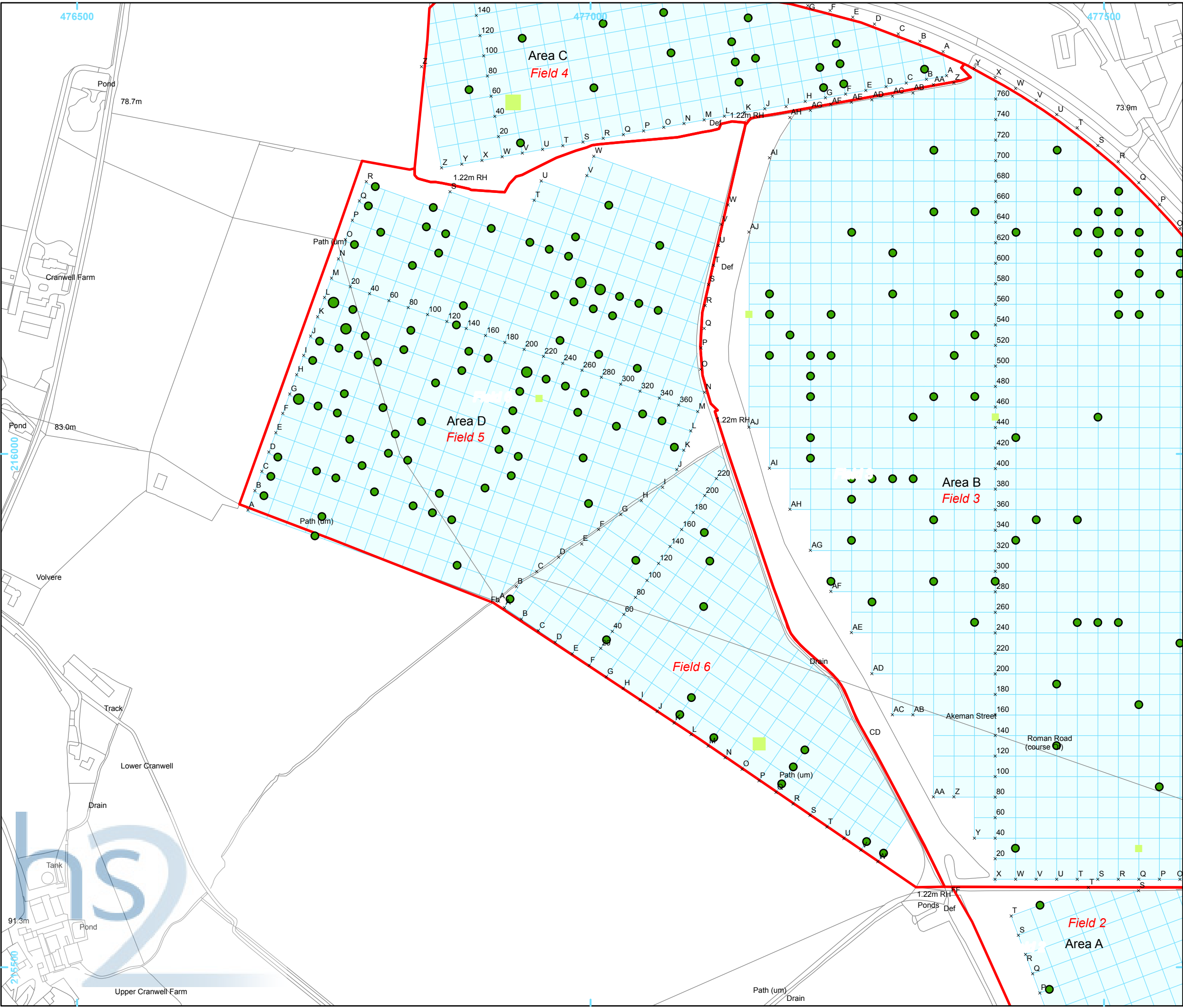
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PROJECT TITLE  
Site KB0AD (A-D): Land near Fleet  
Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking survey.  
Medieval finds

PROJECT NO. 660122 DATE 25-09-2013 FIGURE NO.  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:2,000 CH-004-11.89





- site
- areas subject to fieldwalking
- transect lines

medieval pottery - count

- 1 - 3
- 4 - 8

medieval cbm - weight (g)

- 4 - 15
- 16 - 25
- 26 - 40
- 41 - 97



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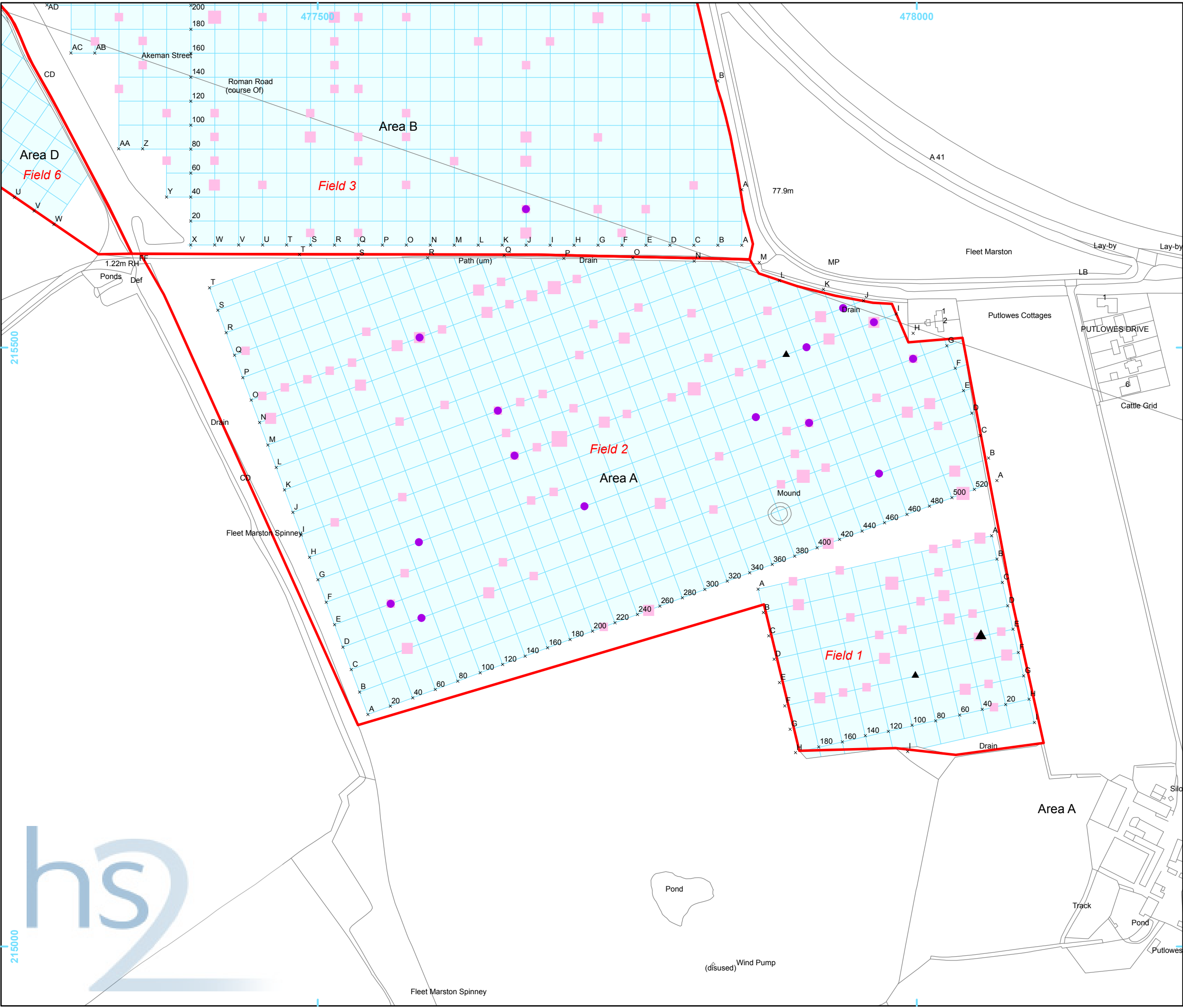
PROJECT TITLE  
Site KB0AD (A-D): Land near Fleet  
Marston Farm, Buckinghamshire

FIGURE TITLE  
KBOAD:Fieldwalking survey.  
Medieval finds

PROJECT NO. 660122 DATE 25-09-2013  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:3,500

FIGURE NO.  
CH-004-11.90





site

areas subject to fieldwalking

transect lines

post-medieval/modern pottery - count

1 - 3

4 - 5

6 - 8

metal slag - weight (g)

4 - 9

10 - 19

20 - 31

32 - 72

post-medieval/modern cbm - weight

1 - 34

35 - 93

94 - 237

238 - 556



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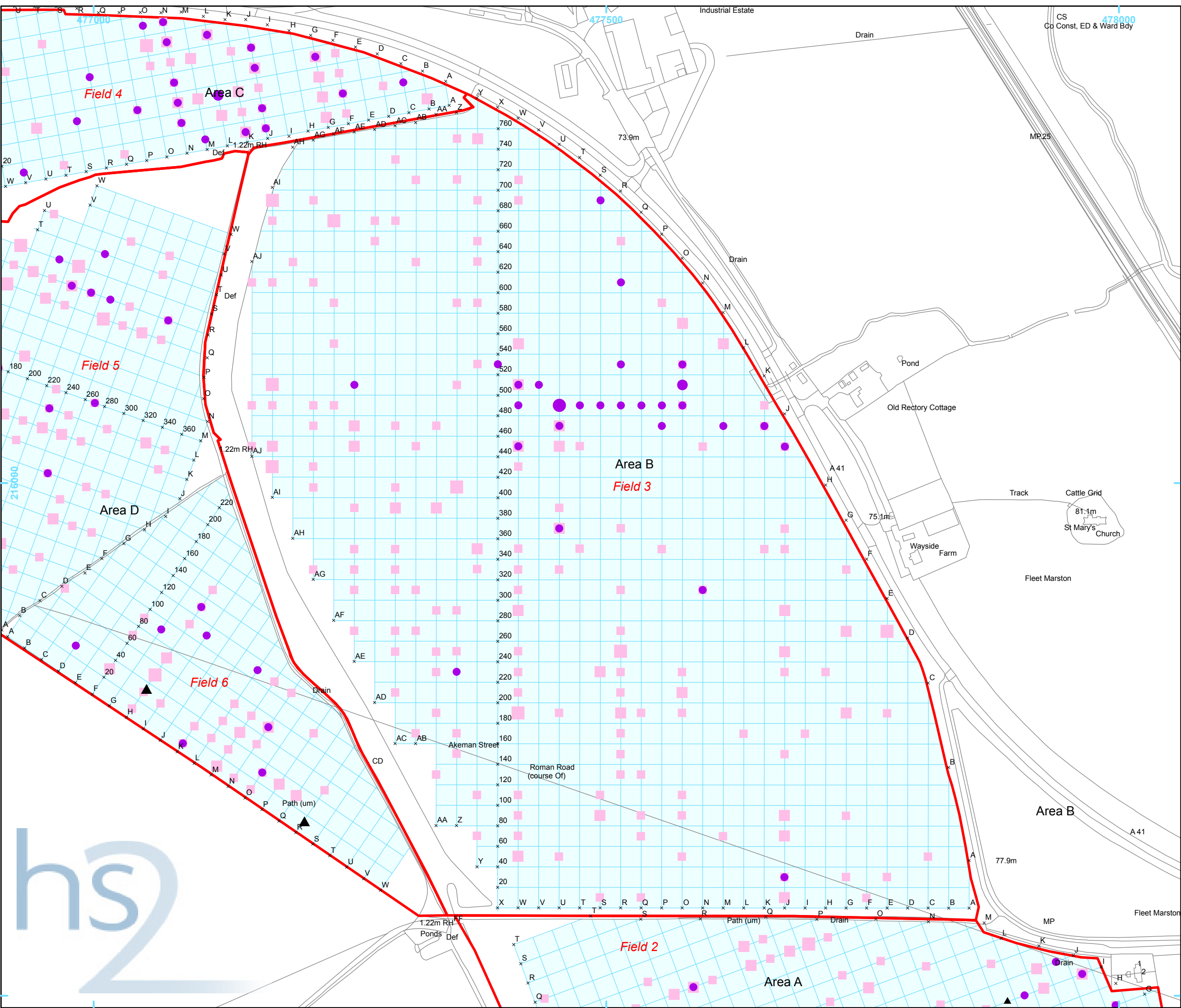
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**PROJECT TITLE**  
Site KB0AD (A-D): Land near Fleet Marston Farm, Buckinghamshire

**FIGURE TITLE**  
Post-medieval/modern finds and undated metal slag

PROJECT NO. 660122	DATE 25-09-2013	FIGURE NO.
DRAWN BY JB	REVISION 00	
APPROVED BY PJM	SCALE@A3 1:3,000	<b>CH-004-11.91</b>





- site
- areas subject to fieldwalking
- transect lines

post-medieval/modern pottery - count

- 1 - 3
- 4 - 5
- 6 - 8

metal slag - weight (g)

- 4 - 9
- 10 - 19
- 20 - 31
- 32 - 72

post-medieval/modern cbm - weight

- 1 - 34
- 35 - 93
- 94 - 237
- 238 - 556

0 150m

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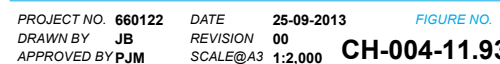
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PROJECT TITLE  
Site KB0AD (A-D): Land near Fleet Marston Farm, Buckinghamshire

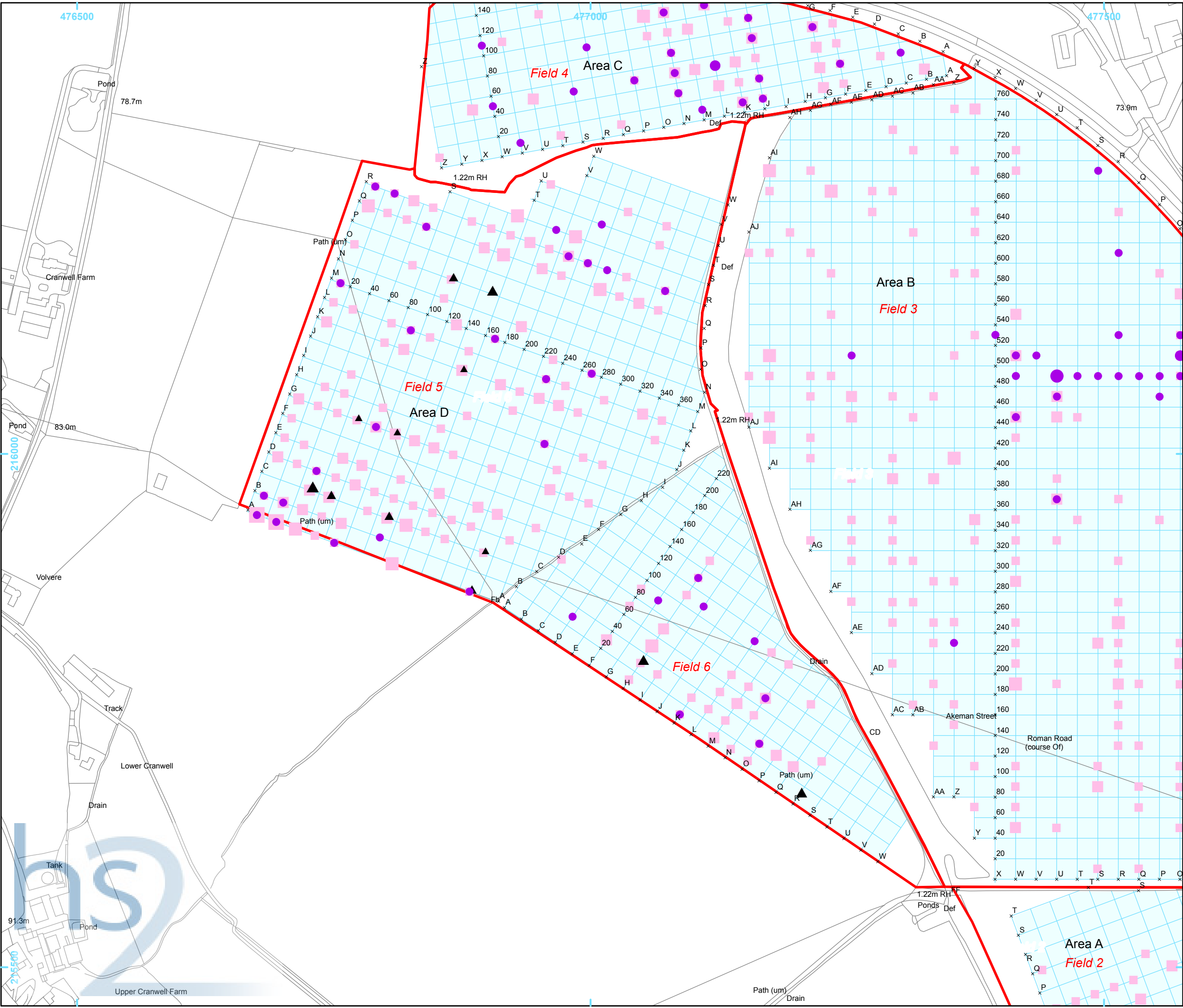
FIGURE TITLE  
Post-medieval/modern finds and undated metal slag

PROJECT NO. 660122 DATE 25-09-2013  
DRAWN BY JB REVISION 00  
APPROVED BY PJM SCALE@A3 1:3,500 CH-004-11.92









site

areas subject to fieldwalking

transect lines

post-medieval/modern pottery - count

1 - 3

4 - 5

6 - 8

metal slag - weight (g)

4 - 9

10 - 19

20 - 31

32 - 72

post-medieval/modern cbm - weight

1 - 34

35 - 93

94 - 237

238 - 556

0150m

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PROJECT TITLE

Site KB0AD (A-D): Land near Fleet Marston Farm, Buckinghamshire

FIGURE TITLE

Post-medieval/modern finds and undated metal slag